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ABSTRACT

This collection contains 19 articles dealing with career education, employment counseling, and vocational rehabilitation in Canada. Included in the volume are the following articles: "A Comparison of Patterns of Values of Anglophone, Francophone, Native, and Immigrant Canadians," by M. Catherine Casserly; "Factor Analysis of the Occupational Interest Quiz," by Carl J. Bognar; "Evaluation and Career Education," by Fred C. Rankine and Carolyn Layden-Stevenson; "Manitoba's Careers Symposium--A Model," by Tom Prins and Elizabeth Speers; "The Neurological Basis for a Cognitive Approach to Counselling," by Maureen Kennedy Baker; "User Requirements for the Microcomputer Application of the Repertory Grid" and "A Review of the Requirements for the Computer Application of the Repertory Grid in CEIC Career Counselling," by Heather Hopwood; "Career Planning" and "The Anatomy of Employment Counselling," by D. Stuart Conger; "Vocational Rehabilitation Counselling Services in the Ontario Workers' Compensation Environment," by Arthur J. Darnbrough; "Vocational Counselling in the Community," by Denis Cooney; "An Analysis of Career Indecision among College and University Students," by Henri Hamel; "Native Community Employment Readiness Program," by George D. Richmond and Rae Eckel; "Studies in Life Skills--Two Unlike Groups," by Joan Hearn; "Vocational Rehabilitation," by John Carroll, John Boyd, Paul Nolis, and Chuck Brownell; "Exploring the Frontiers of Career Development," by Donald E. Super; "Educational and Vocational Counselling in Canada," by D. Stuart Conger; "Job Finding Club Program," by Arthur Mills; and "Depression in the Disabled Adult: Assessment and Intervention," by Robert J. Flynn, Denton C. Buchanan, and Louyse Toulouse. (MN)

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A COMPARISON OF PATTERNS OF VALUES OF ANGLOPHONE, FRANCOPHONE, NATIVE AND IMMIGRANT CANADIANS*

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Employment and Immigration Canada.

INTRODUCTION

Canada is a country characterized by multicultures, two official working languages, and a dichotomized environment of industrial urban area versus the isolated frontier environment of the north and near north. Like most countries, Canada has strong socio-economic differences and major regional differences. However, perhaps an even more distinctive feature in Canada is the fact that it is essentially a nation of immigrants with two dominant, but not exclusive, cultures.

Running through the social and economic structure of the country is a persisting pattern of distinction by ethnic background and by gender. British-Canadians dominate Canadian business and bureaucracy, such that top levels of Canadian wealth and power are difficult to achieve by non-charter group Canadians. Such chances as do exist for mobility are slight, and distributed differentially by rural-urban residence, regions, and ethnic background (Forcese, 1980). And where there is mobility, it is mobility into the middle class, and not the upper class élite or ruling class. Generally, the structure of inequality is stable. Income levels may change, and may arguably constitute an improvement in the lives of all Canadians. But the relative distribution of advantage is persistent, in wealth, power, prestige and the benefits into which these may be translated.

The two major groups in Canada are identified linguistically as Anglophones and Francophones. Much of the recent work on values has focussed on these two groups. In 1975, Nightingale explored, in a controlled and systematic fashion, a broad range of attitudes and reactions of French and English Canadians in their work organization. On virtually all dimensions of work-related opinion and attitudes, when differences exist, French-Canadian employees at all levels (from top management to rank and file workers but especially at the rank and file level) feel more positively than their English-Canadian counterparts.

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* Paper presented at: American Educational Research Association 1983 Annual Meeting, Montréal, Canada April 11, 1983

Among French-Canadian workers, there is a corresponding feeling of confidence and trust in fellow workers and an encouragement of hard work which is not as evident among English-Canadian workers. They also have more positive attitudes toward management and are more satisfied with their salaries than are English-Canadian workers, but interestingly, there are no differences in job satisfaction.

A major job salience difference between Anglophones and Francophones is that Anglophone businessmen are, on the average, more attuned to strictly economic goals than the Francophones. Regardless of whether they worked in a Francophone or an Anglophone company, a big firm or a small one, Francophones tended to feel a greater incompatibility than Anglophones between home and job areas of their lives. McCarrey et al (1977) found no difference between young Francophone and Anglophone government workers on the importance of work intrinsic to job content. But they did find that Francophones attached greater importance to extrinsic interpersonal and organizational factors such as associates, altruism, prestige and security.

Kanungo et al (1976) and Jain et al (1979) had similar findings in a study of Anglophone and Francophone managers. First, both studies, revealed that "interesting nature of work" is the most important job outcome for both Anglophone and Francophone employees. Second, in both studies, Anglophones show greater concern for autonomy and achievement than Francophone employees. On the other hand, Francophone employees in both studies show greater concern for security and fringe benefits. Finally in both studies Francophones exhibit more job satisfaction than Anglophones.

White-Native Cultural Differences

Another major dimension in cultural differences in Canada is that between the Native and white population. At the present time, there are about 600,000 recognized Native Canadians. This does not count those who have given up their official identity as Native. Of these, 300,000 are Métis and non-status Indians, 282,000 status Indians and 18,000 are Inuit.

Native Canadians have many barriers to employment and the salience of jobs in their lives has evolved with very different dimensions than that for white Canadians. The largest majority are of working age and unemployed. The average unemployment rate on reserves is 48% (Employment and Immigration Canada, 1979). The majority live in rural environments, often hundreds of miles from cities where non-skilled jobs are available. A second problem is that Natives often experience cultural alienation working in the white world.

Another major problem is the lack of training that Natives have for typical jobs in an industrialized economy.

A 1969 Canadian Arctic Gas Study found that 49% of the working age native people of the MacKenzie district of the Northwest Territories had never attended school. A 1971 study in northern Manitoba found that 30% had less than grade 5 while only 20% of the working age population had more than grade 10. A large number of adult Indians, Inuit and Métis are not fluent in either of Canada's official languages and they look for work where they can communicate. Finally, many Natives have a fear that employment in a white society will result in cultural genocide. A job then is only salient if they can retain their identity.

Smith (1974) researched the occupational preferences of northern students (i.e. north of 60° latitude). He concluded that ethnic differentiation in northern Canada accounts for little differentiation in evaluation of occupations. Rather, evaluations of occupations by the various ethnic groups are remarkably similar, especially where representatives of the ethnic groups examined come together in one "place of schooling". This is interpreted to mean that the type of culturalist position which assumes that ethnic groups in the North necessarily possess a residue of aboriginal cultural values and attitudes towards occupations incompatible with "modern" attitudes and values toward such aspects of contemporary northern life as the occupational system can safely be rejected. This does not say that there are no cultural differences between northern ethnic groups, even with respect to occupational evaluations; simply that (a) these cultural differrences seem not to follow ethnic group boundaries but to cross-cut them in significant ways, and (b) that these cultural differences seem to have little to do with aboriginal derivation and much more to do with learned responses to common experience with social structural characteristics which transcend ethnic boundaries. Simple ethnic labels such as Eskimo, Métis, Indian, and Euro-Canadian almost certainly obscure significant cultural, regional, class, and other kinds of differentiation internal to these simple categories.

It was with this research in mind that we began a research project which could examine the patterns of values which exist in the 1980's.

METHODOLOGY

A. Method

During the winter of 1981, the Work Importance Study pilot was conducted in Canada. Two parallel forms in both French and English were administered to Canadians from high school age through to mature adult.

B. Survey Instrument

The English and French forms had been translated and cross-translated to assure similarity of content and meaning and subsequent analyses supported the similarity of items. Twenty-two themes or values had been identified by the international teams. Five general items were developed for each theme and placed in one form and five work-specific items per theme or value were developed for the second form.

The questionnaire was designed with a 5 point Likert scale with headings ranging from 1 for very important to 5 for very unimportant.

In addition, a number of biographical questions were asked.

The subjects were volunteers and were requested to participate by their counsellors, teachers or employers.

C. Subjects

In total, there were 2,664 completed forms, 1,350 completed the General Values Scale and 1,314 completed the Work-Related Inventory. Two-thirds of the subjects used the English form and onethird used the French form.

Although the sample was one of convenience, it was representative of the population. It has been described elsewhere (Casserly, 1981). Approximately 18% (n of 309) were immigrants to Canada and about 24% were Natives (n of 384).

RESULTS

We categorized subjects as English-speaking Canadians (i.e. born in Canada and using English as the primary language), French-speaking Canadians, Natives or Immigrants (who use English rather than French).

Results by Value

Ability Utilization deals with the opportunity to use skills at which one is especially adept. This appears to be an important value for all groups who scored it very similarly in both a general way and in a work-specific way. However, while it was second or third in importance for three of the groups, it was only sixth most important for Immigrants (Table 1).

Achievement emphasizes accomplishment on the job rather than progress in a career. All groups scored it almost identically although in terms of ranking, it is of slightly greater importance to Natives and Immigrants than it is to the other groups on the general scale. Overall, at work, it is the second most important value after economic security (Table 2).

Advancement is related to the concept of upward mobility. Again, all groups gave similar scores, with greater importance being given to the value on the general values scale as compared to the work-related scale. However, ranking of the values reveals differences. On the general scale, it is second most important for Natives and Immigrants while only fourth for Francophones and fifth for Anglophones. On the work-related scale, the differences are even more pronounced. Natives and Immigrants rank advancement as sixth most important, while Anglophones rank it eleventh and Francophones rank it a surprising 16th out of 22 values (Table 3).

Aesthetics deals with the opportunity to engage in activity which allows one to appreciate beauty. Here, there were large differences between scores. On both the scales, Francophones, Natives and Immigrants rated this value as of moderate importance, while Anglophones rated it as unimportant. For the Francophones, it was the 13th most important value. The other three groups gave it an overall rating of 18th (Table 4).

Altruism emphasizes helping others. Francophones and Natives scored this value as being important. The majority of Anglophones rated it as only moderately important (14th general and 11th work-specific). Francophones, however, rated it as of high importance on both scales (8th general and 4th work-specific). The Natives rated it as of high importance in the general scale (although it was 12th) and of moderate importance on the job (where it was listed 10th). The Immigrant group, however, rated it as of moderate importance both on the general scale (13th) and on the work-related (7th) (Table 5).

Associates and Social Interaction is related to being with supportive associates and having opportunities for good social interaction. For all four groups, it is important on the general values scale. However, there are major differences on the work-related scale, where the Anglophone majority and Immigrants and Natives rated it of moderate importance (overall 17th) but the Francophones rated it as 4th most important value. Major differences between Francophones and other groups was on such items as "Work in a group rather than by myself" which is of high importance to Francophones but unimportant to the others (Table 6).

Authority represents a willingness to assume responsibility for other people. For all groups on both scales, this value receives a universal rating of unimportance and is one of the lowest ranking of all values. The mean ratings are particularly influenced by such statements as "Tell others what to do", "Make decisions that others must follow" and "Be able to tell other people what to do at work". For the four groups, there was a universal rejection of the value of being the leader (Table 7).

Conversely, Autonomy can be thought of as responsibility for oneself without undue interference from others. On the general scale, all groups rated this value as being of high importance and it was particularly influenced by such statements as "Make my own decisions". However, on the work-related scale, the groups rated it as of moderate importance. Independence on the job, including such factors as working hours, was not particularly important to any group, and these results are very consistent with those given for Authority. On the general scale, it was 9th most important and on the work-related scale it was 18th overall (Table 8).

Creativity was given almost identical ratings by all groups on both scales. It was rated as of moderate importance. On the general scale, across groups it was about the 18th most important value and on the work-related scale it was 13th for all groups. One might say that it is a "nice to have" in one's life but not an essential (Table 9).

Economic Rewards concerns the acquisition of goods for services rendered. This is one of the few scales where large differences appear between the general scale and the work-related scale. In terms of score, it is of moderate importance to Immigrants and unimportant to the other three groups, when asked about it in a general way. However, when the questions are made work-specific, the value becomes important for all four groups who give it almost identical scores. In terms of ranking, it is 19th overall in importance on the general scale but it is fifth on the work-related scale. Here, the Natives and Immigrants ranked it slightly higher (5th) than do the other two groups (Table 10).

Economic Security refers to the assurance that one's income is relatively stable over time. For all four groups on both scales, this is the single most important overall value. Items such as "have secure future" and "Feel secure in my job" received the rating of greatest importance of all the items in the inventories. The variation of response as measured by standard deviation was also the smallest on this value in comparison to all the others. This value was given a rating of 1.4 by the Natives making it the highest average ranking given by any group to any value (Table 11).

Environment concerns one's physical surroundings. On this value, the groups were consistent to one another in their rating of it as of moderate importance on both scales with the Francophones and Natives rating it as having slightly higher importance on the work-related scale. Overall, it was 14th on the general list of values and on the work-related scale, 6th (Table 12).

Intellectual Stimulation deals with the opportunity to learn new things and to solve problems. Both in a general and job-specific way all subjects want the chance to deal with new ideas and to learn new skills. The one exceptional area was that Immigrants generally did not want to have to think about what they were doing at work nor were they as likely to rate as important the opportunity to keep on learning new things at work. On the general scale, it was rated as tenth in importance. On the work-specific scale, it was rated as about 6th most important for all groups (Table 13).

Life Style relates to the freedom to live as one wishes, according to one's own standards and values. On the general scale, it is important to all groups. For Anglophones, Natives and Immigrants it is rated as the second most important value (in a tie position with other values) and for Francophones it was ranked as 4th most important. The item of greatest importance was "live my life as I see fit". However, on the job, it is not particularly important to be able to do strictly as one chooses. Being free from organizational rules, expectations or obligations was rated as being unimportant to all respondents. Overall, on the work-related scale it was rated at 17th most important for Anglophones and Immigrants, and 13th for Francophones. This reinforces the ratings given on the Authority and Autonomy values (Table 14).

Participation in Organizational Decision Making is a value in which questions related to shaping the direction of one's own life are rated as being very important but being part of the management at work is not particularly important. This is similar to the responses given to Life Style. On the general scale it is rated a 10th most important and on the work-related scale it is about 6th overall and generally of moderate to high importance. This rating is particularly influenced by the importance given to such items as "Be consulted if there are any problems that affect my job". Overall, this value is important insofar as it impacts on the day-to-day life of the individual (Table 15).

Socio-economic status which arouses respect, esteem, admiration, and recognition is reflected in Prestige. Overall, it is of moderate to high importance of all groups who scored the items almost identically. On both scales it was ranked as 12th most important value (Table 16).

Responsibility emphasizes accountability for one's own actions and for the care of others. On the general scale, the items refer to responsibility for self and one's own actions and the value is rated very highly, especially on the item "Be able to handle my responsibilities". On the general scale, this value is rated as of highest importance for Francophones and second most important for the other three groups. On the work-related scale, it is rated as only of moderate importance because many of the items refer to being in charge at work. For Anglophones, it was 14th, for Natives 9th, and Immigrants, it is rated 11th in ranking. For Francophones, however, it is 20th. Again, the most importance was placed on control over one's own life (Table 17).

Risk-taking and Safety relates to the element of danger either through loss of face or physical injury. All the groups rate this value as being unimportant. The only important scores are given to such items as "Try something even where there is a chance of failure" and "have great challenge in my work" which might both be considered under the category of intellectual stimulation. Items with the word "danger" in them were soundly rejected. This value was usually rated as 21st in overall ranking of importance by all groups (Table 18).

Spiritual Value relates to the concept of communing with entities greater than oneself. Overall, it is of moderate importance, with the greatest importance being given to the item "Work in a way that is fair and just to my fellow worker". On the general scale, it is rated as 15th in importance and on the work-related scale, it was 11th or midway in importance (Table 19).

The value of Supervisory Relations focuses on how the individual relates to or is treated by those in positions of authority. On both scales and for all four groups, this value is rated as being important. On the general scale it is in the top 7 values (for Natives, it is tied for second place along with five others). On the work-related scale, it is second most important for Natives and Anglophones, 3rd for Immigrants and 4th for Francophones (Table 20).

Variety deals with the desire for change and diversity in one's life and work. This is of moderate importance on both scales for all groups with the exception that the item "Change work activities frequently" is rated as unimportant. It is of greatest importance to Immigrants who rate it 15th on the general scale and 13th on the work-specific. Natives rank it 16th on general and 15th on work-specific. Francophones give it the least importance ranking it 18th on the general list and 16th on the work-related list (Table 21).

The final value which we examined is called Cultural Identity and assesses the importance given to one's ethnic or cultural orientation. For both the majority Anglophones and the Immigrants, this is the least important value on both the general and work-related scale. However, on the work-related scale, both Francophones and Natives rate it as at least of moderate importance. The individual items indicate acceptance of others by all groups. The differences between groups is based on the importance given to one's own acceptance. For example, "Be able to use my own language whenever I want" is of high importance to Francophones but not to Immigrants (Table 22).

SUMMARY OF RESULTS

The most intriguing result to be derived from this data is not that differences exist but rather that there are such great similarities. It is possible to draw the general Canadian picture and then note specific differences between groups. The important values on the General Value Scale are Economic Security, Responsibility (especially for self), Life Style, Ability Utilization, Achievement and Advancement, while the least important are first Cultural Identity, followed by RiskTaking and Safety, Authority and Economic Rewards. (Table 23)

The Anglophone subjects generally match this picture. Francophones deviate from it in that they are the only group to rate Responsibility as the most important value and they place more emphasis on Associates and Social Interaction. Natives generally match the ordering of values but cluster the higher seven values as almost equally great in importance. Immigrants vary only in that they rank Ability Utilization as of lesser importance than do the other three groups. (Table 24)

On the Work-Related Values Inventory, there were a number of differences. Anglophones rank Associates and Social Interactions lower than the overall average ranking and rank Prestige, Autonomy and Authority as higher than average ranking. The Francophone group has a number of differences from the average ranking as well. The strongest one is the importance given to Associates and Social Interaction. In addition, Altruism, Life Style, Aesthetics and Cultural Identity are given greater importance. On the other hand, Advancement and Responsibility are ranked lower (Table 25).

The Native subjects ranked Advancement and Responsibility as of much greater importance than the average ranking and participation in Organizational Decision Making as of lower than average importance.

The Immigrant group also ranked Advancement and Responsibility as being of greater than average importance and gave much less importance to Associates and Social Interaction, Environment and Intellectual Stimulation.

CONCLUSIONS

The Values Inventory has proved itself useful as a tentative means of identifying differences among groups. Perhaps, the strongest conclusion is not that there are differences, which is something of which we were already aware, rather it is the support given to the idea that differences are not due to some special genetic coding, or even to some unique process of socialization but due to what is required of a group to live successfully with the cultural majority. For example, both Natives and Immigrants have traditionally been at the bottom of the socio-economic ladder and both value moving up in the world. Their value ratings support this goal. Similarly, Francophones especially within Québec, rate as important the use of their own language but the Immigrant does not because other values rated as more important may conflict with this possibility.

It is hoped that future research will be able to identify even more specifically the values of all Canadians so that better services can be provided and more satisfying life environments can be developed.

BIBLIOGRAPHY

Burstein, M., Tienhaara, N., Hewson, P., and Warrander, B., Canadian Work Values - Findings of a Work Ethic Survey and A Job Satisfaction Survey, Ottawa: Department of Manpower and Immigration, 1975.

Casserly, M.C and Côté, L., The Work Importance Study in the Canadian Context, Ottawa: Employment and Immigration Canada, 1980.

Casserly, M.C. The Development of a Measure to Identify General and Work Related Values. Paper presented at the Canadian Guidance and Counselling Association Annual Conference, Calgary, 1981.

Casserly, M.C. Support for the Concepts of Commitment and Participation as Factors in Determining the Importance of Work and Life Roles. Paper presented at the International Congress of Applied Psychology, Edinburgh, 1982.

Employment and Immigration Canada, The Development of an Employment Policy for Indian, Inuit and Metis People: Ottawa, Author, 1979.

Forcese, Dennis, The Canadian Class Structure, Toronto: McGraw-Hill Ryerson Ltd., 1980.

Jackson, J.W., and Poushinsky, N. Migration to Northern Mining Communities: Structural and Social-Psychological Dimensions, Winnipeg: Centre for Settlement Studies, University of Manitoba, 1971.

Knasel, E.G., Super, D.E. and Kidd, J.M. Work Salience and Work Values: Their Dimensions, Assessment and Significance, Cambridge, England: National Institute for Career Education and Counselling, 1981.

McCarrey, M.W., Edwards, S. and Jones, R. "The Influence of ethno-linguistic group membership, sex and position level on motivational orientation of Canadian Anglophone and Francophone employees". Canadian Journal of Behavioural Sciences, 9(3), 1977, pp. 274-282.

Nightingale, D.V., "The French-Canadian Worker Shows up Well in the Study", The Canadian Personnel and Industrial Relations Journal, 22,(5) 1975, pp. 28-30.

Super, D.E., Career Education and the Meaning of Work, Washington, US Government Printing Office, 1975.

Super, D.E., "The Babble that is Babel", Journal of Career Education, 5, 1978, pp. 156-171.

Super, D.E. "A Life-Span, Life-Space Approach to Career Development", Journal of Vocational Behaviour, 16, 1980, pp. 282-298.

TABLE 1

RESULTS FOR SUBJECTS ON ABILITY UTILIZATION

ABILITY UTILIZATION	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
1. Use my special skills	1.6	0.6	1.5	0.6	1.7	0.7	1.6	0.6
23. Make the most of my strong points	1.8	0.7	1.6	0.7	1.9	0.8	1.7	0.6
45. Do something at which I am really good	1.6	0.7	1.6	0.7	1.7	0.8	1.6	0.7
67. Have the skills needed for what I have to do	1.6	0.6	1.7	0.7	1.6	0.7	1.6	0.6
89. Develop as a person	1.6	0.6	1.9	0.9	1.6	0.7	1.5	0.6
OVERALL TOTAL SCORE	1.7	0.7	1.6	0.8	1.7	0.7	1.6	0.6
B. WORK-RELATED SCALE								
1. Do work that takes advantage of my abilities	1.7	0.7	1.5	0.6	1.9	0.7	1.8	0.9
23. Have a job that really interests me	1.4	0.6	1.2	0.5	1.4	0.6	1.4	0.5
45. Do work which I can do well	1.6	0.6	1.4	0.6	1.5	0.6	1.6	0.6
67. Do work in which I have to use all my skills and knowledge	2.0	0.8	1.8	0.8	2.0	0.8	1.9	0.7
89. Do work in which I can develop my abilities	1.8	0.6	1.6	0.6	1.8	0.7	1.7	0.6
OVERALL TOTAL SCORE	1.7	0.7	1.5	0.7	1.7	0.8	1.7	0.7

TABLE 2

RESULTS FOR SUBJECTS ON ACHIEVEMENT

ACHIEVEMENT	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
2. Do something that will result in lasting changes	2.2	0.8	2.2	0.9	2.1	0.9	2.2	0.9
24. Get the feeling that I have really achieved something	1.6	0.6	1.5	0.6	1.6	0.7	1.5	0.6
46. Have results which show that I have done well	1.6	0.7	1.6	0.7	1.6	0.7	1.6	0.6
68. Know that my efforts will show	1.8	0.7	2.0	0.9	1.8	0.7	1.7	0.7
90. Take pride in what I do	1.5	1.6	1.4	0.6	1.5	0.6	1.4	0.6
OVERALL TOTAL SCORE	1.8	0.7	1.7	0.8	1.7	0.7	1.7	0.7
B. WORK-RELATED SCALE								
2. Reach a high standard in my work	1.5	0.6	1.6	0.7	1.7	0.7	1.5	0.6
24. Have a job where quality counts	1.8	0.7	1.8	0.8	1.8	0.8	1.8	0.7
46. Be very good at work	1.5	0.6	1.5	0.7	1.4	0.6	1.5	0.5
68. Be where how well I do my work will matter	2.0	0.7	1.8	0.8	1.9	0.7	1.9	0.7
90. Do a good job even if it is really difficult	1.7	0.6	1.5	0.7	1.7	0.7	1.6	0.7
OVERALL TOTAL SCORE	1.7	0.7	1.7	0.7	1.7	0.7	1.6	0.7

TABLE 3

RESULTS FOR SUBJECTS ON ADVANCEMENT

ADVANCEMENT	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
3. Know that I am on my way to better things	1.7	0.7	1.4	0.7	1.6	0.7	1.6	0.7
25. Feel that I can take steps to get ahead	1.8	0.7	1.7	0.7	1.7	0.7	1.6	0.6
47. Know that things will get better as I become more experienced	1.7	0.7	1.5	0.7	1.5	0.6	1.6	0.6
69. Be where people have a chance to get ahead	1.9	0.8	2.2	1.0	1.8	0.8	1.8	0.8
91. Have ideas about what to do with my life	1.6	0.6	1.5	0.6	1.6	0.7	1.6	0.6
OVERALL TOTAL SCORE	1.8	0.7	1.7	0.8	1.7	0.7	1.6	0.7
B. WORK-RELATED SCALE								
3. Get ahead quickly in my career	2.2	0.8	2.1	0.9	2.1	0.8	2.0	0.8
25. Have a job that leads to a better future	1.7	0.7	1.7	0.8	1.5	0.6	1.5	0.7
47. Be able to get promotions	1.9	0.8	1.9	0.9	1.7	0.6	1.8	0.9
69. Work where people think in terms of advancement	2.3	0.9	2.8	1.2	2.1	0.8	2.1	0.8
91. Work where getting ahead is considered important	2.4	0.9	2.4	1.1	2.3	0.9	2.2	1.0
OVERALL TOTAL SCORE	2.1	0.9	2.2	1.1	1.9	0.9	1.9	0.9

TABLE 4

RESULTS FOR SUBJECTS ON AESTHETICS

AESTHETICS	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
4. Make beautiful things	2.7	0.9	1.9	0.9	2.7	1.0	2.5	0.9
26. Be able to make my surroundings more beautiful	2.3	0.8	2.1	0.9	2.1	0.8	2.1	0.8
48. Express my appreciation for beauty	2.5	0.9	2.2	1.0	2.5	0.9	2.3	1.0
70. Make life more beautiful	2.3	0.9	1.8	0.8	2.1	0.9	2.1	0.9
92. Be able to add to the beauty of the world	2.5	0.9	2.3	0.9	2.5	0.9	2.4	0.9
OVERALL TOTAL SCORE	2.5	0.9	2.0	0.9	2.4	0.9	2.3	0.9
B. WORK-RELATED SCALE								
4. Be appreciated for the beauty of my work	2.3	0.9	2.0	1.0	2.2	0.9	2.1	0.9
26. Find pleasure in the beauty of my work	2.2	0.9	1.9	0.9	2.1	1.0	2.0	0.9
48. Add beauty or grace through my work	2.6	0.9	2.2	1.0	2.5	0.8	2.4	1.0
70. Work in a beautiful place	2.8	1.0	2.3	1.1	2.8	1.0	2.7	1.0
92. Be concerned with beauty in my work	2.7	1.0	2.3	1.0	2.6	1.0	2.4	1.0
OVERALL TOTAL SCORE	2.5	1.0	[illegible]	1.0	2.5	1.0	2.3	1.0

TABLE 5

RESULTS FOR SUBJECTS ON ALTRUISM

ALTRUISM	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
5. Help make others happy	1.8	0.7	1.6	0.7	1.6	0.8	1.8	0.7
27. Be able to set a person on his or her own feet	2.2	0.8	1.7	0.8	2.1	0.8	2.1	0.7
49 Help others with personal or social problems	2.2	0.9	2.0	0.9	2.1	0.9	2.0	0.8
71. Help others even if it means giving up some of my own comforts	2.2	0.8	2.2	0.9	2.1	0.9	2.3	0.8
93. Help people in need	1.9	0.8	1.8	0.8	1.8	0.9	1.9	0.7
OVERALL TOTAL SCORE	2.1	0.8	1.8	0.9	1.9	0.9	2.0	0.8
B. WORK-RELATED SCALE								
5. Be involved in work in which people count	1.9	0.8	1.9	0.9	2.1	0.9	1.9	0.8
27. Feel that my work is useful to other individuals and groups	1.9	0.8	1.8	0.8	2.0	0.8	1.9	0.8
49. Do work which improves things for others	2.1	0.8	1.9	0.9	2.1	0.8	1.9	0.8
71. Be involved in work in which the goal is helping people	2.2	0.9	1.9	0.9	2.2	0.9	2.0	0.8
93. Show sympathy for other people while I work	2.4	0.9	1.7	0.8	2.4	0.8	2.1	0.9
OVERALL TOTAL SCORE	2.1	0.9	1.8	0.9	2.1	0.9	2.0	0.8

TABLE 6

RESULTS FOR SUBJECTS ON ASSOCIATES AND SOCIAL INTERACTION

ASSOCIATES AND SOCIAL INTERACTION	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
6. Do things with other people	1.9	0.7	1.9	0.8	1.7	0.7	1.9	0.8
28. Be in touch with people	1.8	0.7	1.5	0.7	1.7	0.7	1.9	0.8
50. Have people take the time to chat with me	2.2	0.9	1.9	0.9	2.2	0.9	2.3	0.8
72. Be with friends	1.7	0.7	1.7	0.8	1.6	0.7	1.8	0.7
94. Do things with people I like	1.8	0.7	1.6	0.7	1.7	0.7	1.8	0.7
OVERALL TOTAL SCORE	1.8	0.7	1.7	0.8	1.8	0.8	1.9	0.8
B. WORK-RELATED SCALE								
6. Be able to talk with people I like	2.1	0.9	1.9	0.9	2.1	0.9	2.2	1.0
28. Work in a group rather than by myself	2.9	1.0	1.8	0.8	2.8	1.1	2.9	1.0
50. Be with other people while I work	2.3	0.9	1.9	0.9	2.3	1.0	2.4	1.0
72. Work where there are friendly people around me	1.8	0.7	1.9	0.9	1.7	0.7	1.8	0.8
94. Have a job where I can make friends easily	2.1	0.8	1.7	0.8	2.1	0.9	2.1	0.9
OVERALL TOTAL SCORE	2.3	0.9	1.8	0.9	2.2	1.0	2.3	1.0

TABLE 7

RESULTS FOR SUBJECTS ON AUTHORITY

AUTHORITY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
7. Influence what other people will do	2.4	0.8	2.9	1.1	2.5	0.9	2.5	0.9
29. Tell others what to do	3.1	0.8	3.4	1.0	3.0	0.9	2.9	0.9
51. Make decisions that others must follow	2.9	0.8	2.4	1.0	2.8	0.9	2.8	0.9
73. Have other people know that my instructions are to be followed	2.6	0.9	2.8	1.1	2.5	0.9	2.5	0.9
95. Have the authority to get things done	2.1	0.8	2.3	0.9	2.1	0.8	2.0	0.7
OVERALL TOTAL SCORE	2.6	0.9	2.8	1.1	2.6	0.9	2.6	0.9
B. WORK-RELATED SCALE								
7. Direct the work that I am involved in	2.3	0.8	2.6	1.0	2.4	0.8	2.3	0.9
29. Be known as an expert in my job	2.2	0.9	2.3	1.0	2.4	0.8	2.1	0.9
51. Be able to tell other people what to do at work	3.0	0.9	3.0	1.0	2.9	0.9	2.7	1.0
73. Be able to be a leader at work	2.6	0.9	2.8	1.0	2.6	0.9	2.4	0.9
95. Be the one who manages things at work	2.7	0.9	3.0	1.0	2.7	0.9	2.5	0.9
OVERALL TOTAL SCORE	2.5	0.9	2.7	1.0	2.6	0.9	2.4	0.9

TABLE 8

RESULTS FOR SUBJECTS ON AUTONOMY

AUTONOMY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
8. Make my own decisions	1.5	0.6	1.5	0.6	1.6	0.7	1.5	0.7
30. Be independent of other people	2.3	0.9	2.6	1.2	2.2	1.0	2.2	1.0
52. Plan my own activities	1.9	0.7	1.9	0.8	2.1	0.7	1.9	0.8
74. Make my own decisions about how to day-to-day problems	1.8	0.7	1.6	0.7	1.9	0.7	1.8	0.6
96. Be able to act on my own	1.7	0.6	1.6	0.7	1.7	0.7	1.6	0.7
OVERALL TOTAL SCORE	1.8	0.8	1.9	1.0	1.9	0.8	1.8	0.8
B. WORK-RELATED SCALE								
8. Make my own decisions at work	1.9	0.7	2.0	0.9	2.0	0.8	1.9	0.8
30. Be able to decide what to do at work	2.0	0.7	1.9	0.8	2.1	0.7	2.0	0.7
52. Be free to get on with a job in my own way	2.1	0.8	2.1	1.0	2.1	0.8	2.1	0.8
74. Set my own working hours	2.6	0.9	2.8	1.1	2.7	0.8	2.5	0.8
96. Have my own work schedule	2.5	0.9	2.8	1.1	2.5	1.0	2.3	1.0
OVERALL TOTAL SCORE	2.2	0.9	2.3	1.1	2.3	0.9	2.2	0.9

TABLE 9

RESULTS FOR SUBJECTS ON CREATIVITY

CREATIVITY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
GENERAL VALUES SCALE								
9. Make something different from anything made before	2.8	0.9	2.6	1.1	2.7	1.0	2.7	0.9
31. Think up new things to make or do	2.5	0.8	2.2	0.9	2.4	0.8	2.4	0.8
53. Come up with better ways of doing things	2.1	0.7	2.0	0.8	2.0	0.8	2.0	0.8
75. Be able to seek new solutions to the problems I face	1.9	0.6	1.8	0.7	1.9	0.7	1.8	0.6
97. Discover, develop, or design new things	2.4	0.9	2.0	0.8	2.3	0.9	2.3	0.9
OVERALL TOTAL SCORE	2.3	0.9	2.1	0.9	2.3	0.9	2.2	0.9
WORK-RELATED SCALE								
9. Create something new in my work	2.4	0.9	2.1	0.9	2.4	0.9	2.4	0.8
31. Be inventive in my work	2.1	0.8	2.0	0.9	2.2	0.9	2.1	0.7
53. Use existing knowledge to develop new ideas at work	2.3	0.8	2.2	0.9	2.2	0.8	2.2	0.9
75. Have a chance to try out new ideas at work	2.1	0.7	2.1	0.8	2.3	0.8	2.1	0.8
97. Be in a job where I can create new ideas	2.1	0.8	2.1	0.8	2.2	0.8	2.0	0.8
OVERALL TOTAL SCORE	2.2	0.8	2.1	0.8	2.2	0.8	2.2	0.8

TABLE 10

RESULTS FOR SUBJECTS ON ECONOMIC REWARDS

ECONOMIC REWARDS	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
10. Have good housing	1.8	0.8	1.8	0.8	1.7	0.8	1.8	0.8
32. Have a high standard of living	2.2	0.9	2.4	1.0	2.1	0.9	2.1	0.9
54. Have all the nice things that I want	2.5	1.0	2.9	1.1	2.5	[illegible]	2.3	1.0
76. Be able to live well without working	3.2	1.2	3.5	1.3	3.1	1.3	2.9	1.4
98. Be able to retire early	2.8	1.1	3.3	1.2	2.7	1.1	2.6	1.1
OVERALL TOTAL SCORE	2.5	1.1	2.8	1.3	2.5	1.2	2.3	1.1
B. WORK-RELATED SCALE								
10. Have a good income	1.7	0.7	1.8	0.8	1.5	0.7	1.5	0.5
32. Be well paid for whatever I do	1.8	0.7	2.1	0.9	1.7	0.7	1.7	0.6
54. Be able to work all I want to, including overtime	2.4	0.9	2.2	0.9	2.3	1.0	2.3	0.9
76. Have good fringe benefits	2.0	0.8	2.2	0.9	1.9	0.8	1.8	0.8
98. Earn enough to live well	1.6	0.7	1.4	0.6	1.5	0.6	1.6	0.7
OVERALL TOTAL SCORE	1.9	0.8	1.9	0.9	1.8	0.8	1.8	0.8

TABLE 11

RESULTS FOR SUBJECTS ON ECONOMIC SECURITY

ECONOMIC SECURITY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
11. Have a secure future	1.4	0.6	1.4	0.6	1.4	0.6	1.4	0.6
33. Know that I can manage even in bad times	1.6	0.6	1.5	0.6	1.5	0.6	1.6	0.6
55. Be able to count on having enough to live on	1.5	0.6	1.6	0.8	1.5	0.6	1.5	0.6
77. Have a regular income	1.6	0.7	1.7	0.8	1.5	0.8	1.6	0.7
99. Have a feeling of security	1.6	0.6	1.6	0.8	1.4	0.6	1.6	0.7
OVERALL TOTAL SCORE	1.5	0.6	1.6	0.8	1.5	0.7	1.5	0.7
B. WORK-RELATED SCALE								
11. Feel secure in my job	1.5	0.6	1.5	0.6	1.4	0.6	1.5	0.6
33. Feel that I can keep a job even in times of high unemployment	1.5	0.6	1.5	0.8	1.4	0.6	1.5	0.6
55. Have a secure position	1.6	0.6	1.5	0.7	1.4	0.5	1.5	0.7
77. Be where employment is regular and secure	1.7	0.6	1.6	0.7	1.4	0.6	1.6	0.7
99. Know that I can always make a living	1.5	0.6	1.6	0.7	1.4	0.5	1.5	0.6
OVERALL TOTAL SCORE	1.6	0.6	1.5	0.6	1.4	0.6	1.5	0.6

TABLE 12

RESULTS FOR SUBJECTS ON ENVIRONMENT

ENVIRONMENT	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
12. Like the setting in which I do things	1.7	0.7	1.4	0.6	1.8	0.7	1.7	0.7
34. Have the materials, tools and equipment I need to get things done	1.8	0.7	1.7	0.7	1.8	0.7	1.8	0.8
56. Hear enough sounds and movements to feel the place where I am is alive	2.4	1.0	2.7	1.2	2.3	1.0	2.4	1.0
78. Be able to be outdoors a great deal	2.2	1.0	2.1	1.0	2.2	1.0	2.2	1.0
100. Be in a nice part of the city, town or country	1.9	0.9	2.3	1.1	2.0	0.8	2.0	0.9
OVERALL TOTAL SCORE	2.0	0.9	2.0	1.1	2.0	0.9	2.0	0.9
B. WORK-RELATED SCALE								
12. Have enough space and light to do my work	1.8	0.7	1.7	0.8	1.7	0.7	1.8	0.8
34. Have good sanitary facilities (e.g. washroom) at work	1.8	0.9	1.9	1.0	1.7	0.9	1.8	0.9
56. Work in a place which makes it easy to do my work	1.9	0.8	1.8	0.9	1.8	0.8	1.9	0.8
78. Be protected from the weather while I work	2.3	1.0	2.0	0.9	2.2	1.0	2.1	1.0
100. Have a workplace where the temperature is always comfortable for me	2.3	1.0	2.0	1.0	2.2	0.9	2.2	1.0
OVERALL TOTAL SCORE	2.0	0.9	1.9	0.9	1.9	0.9	2.0	0.9

TABLE 13

RESULTS FOR SUBJECTS ON INTELLECTUAL STIMULATION

	INTELLECTUAL STIMULATION	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
		Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A.	GENERAL VALUES SCALE								
13.	Have a chance to deal with new problems or ideas	2.0	0.7	2.1	0.8	2.0	0.7	1.9	0.7
35.	Confront complex and challenging situations	2.1	0.8	2.3	0.9	2.1	0.8	2.0	0.8
57.	Keep on learning new things	1.7	0.6	1.8	0.7	1.6	0.6	1.6	0.6
79.	Keep up with new developments in the world	2.2	0.8	2.0	0.9	2.2	0.9	2.1	0.9
101.	Be able to take courses that add to my knowledge and skills	1.8	0.7	1.7	0.8	1.8	0.8	1.6	0.7
	OVERALL TOTAL SCORE	2.0	0.9	2.0	0.9	1.9	0.8	1.9	0.8
B.	WORK-RELATED SCALE								
13.	Find mental challenge in my work	1.9	0.8	2.2	0.9	2.0	0.7	1.9	0.8
35.	Work with new ideas or methods	2.1	0.8	2.1	0.8	2.2	0.8	2.1	0.8
57.	Have to think about what I am doing at work	2.0	0.7	2.1	0.8	1.9	0.6	2.4	0.9
79.	Keep on learning new things at work	1.8	0.6	1.7	0.7	1.8	0.6	2.4	0.9
101.	Keep up with changing methods at work	1.8	0.7	1.6	0.7	1.9	0.7	1.9	0.8
	OVERALL TOTAL SCORE	1.9	0.7	1.9	0.8	2.0	0.7	2.1	0.7

TABLE 14

RESULTS FOR SUBJECTS ON LIFE STYLE

LIFE STYLE	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
14. Live my life as I see fit	1.6	0.6	1.6	0.7	1.6	0.7	1.5	0.7
36. Be able to live according to my own ideas	1.7	0.7	1.9	0.8	1.8	0.7	1.6	0.6
58. Have the kind of home, neighbourhood, leisure activities and friends that I enjoy	1.5	0.6	1.8	0.9	1.5	0.6	1.6	0.6
80. Be able to live my life my way	1.7	0.7	1.7	0.8	1.7	0.8	1.6	0.8
102. Develop my own way of life	1.7	0.7	1.7	0.7	1.8	0.7	1.7	0.7
OVERALL TOTAL SCORE	1.6	0.7	1.7	0.8	1.7	0.7	1.6	0.7
B. WORK-RELATED SCALE								
14. Work at my own pace	2.0	0.8	1.8	0.8	2.0	0.8	2.0	0.7
36. Be free from organizational rules, expectations or obligations	2.8	0.9	2.4	0.9	2.9	0.9	2.6	0.9
58. Have freedom at work to dress and act the way I want to	2.3	0.9	2.3	1.1	2.3	1.0	2.4	0.9
80. Be able to work at what I want to when I want to	2.5	0.9	2.7	1.2	2.6	0.9	2.4	0.9
102. Be free to be the kind of person I want to be while at work	1.9	0.7	1.5	0.7	1.9	0.8	1.9	0.8
OVERALL TOTAL SCORE	2.3	0.9	2.1	1.0	2.3	0.9	2.3	0.9

TABLE 15

RESULTS FOR SUBJECTS ON PARTICIPATION IN ORGANIZATIONAL DECISION MAKING

PARTICIPATION IN ORGANIZATIONAL DECISION MAKING	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
15. Be where everyone has a voice that is heard	2.2	0.9	2.2	1.0	2.0	0.9	2.2	0.9
37. Share in decisions that will affect me	1.5	0.6	1.7	0.8	1.6	0.7	1.6	0.7
59. Have a say in how things are done	2.0	0.7	2.0	0.8	2.1	0.7	1.9	0.6
81. Be kept informed about everything that affects me	1.7	0.6	1.6	0.7	1.7	0.7	1.8	0.7
103. Be able to express my opinions and know that they will be heard	1.9	0.7	1.9	0.8	1.8	0.7	1.8	0.7
OVERALL TOTAL SCORE	1.9	0.7	1.9	0.9	1.9	0.8	1.9	0.8
B. WORK-RELATED SCALE								
15. Know how things are done by my work group or organization	1.9	0.7	1.7	0.8	1.9	0.8	2.0	1.7
37. Be consulted if there are any problems that affect my job	1.6	0.6	1.5	0.6	1.7	0.7	1.6	0.7
59. Be able to help shape policy and plans at work	2.2	0.8	2.4	1.0	2.4	0.8	2.1	0.8
81. Know that everyone really has the opportunity to participate in making decisions at work	2.2	0.8	2.1	0.9	2.2	0.8	2.2	0.8
103. Share common responsibilities at work	2.1	0.7	1.9	0.8	2.1	0.7	2.1	0.8
OVERALL TOTAL SCORE	2.0	0.8	1.9	0.9	2.0	0.8	2.0	0.8

TABLE 16

RESULTS FOR SUBJECTS ON PRESTIGE

PRESTIGE		MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
		Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A.	GENERAL VALUES SCALE								
16.	Be treated with respect	1.5	0.6	1.4	0.6	1.5	0.6	1.5	0.6
38.	Know that my family is proud of me	1.6	0.8	1.7	0.9	1.6	0.8	1.7	0.8
60.	Be admired for my knowledge and skills	2.1	0.8	2.2	0.9	2.2	0.9	2.1	0.9
82.	Be recognized for my accomplishments	1.9	0.7	2.2	0.9	1.9	0.8	1.8	0.7
104.	Be viewed as a special person	2.4	0.9	2.7	1.1	2.6	0.9	2.4	1.0
	OVERALL TOTAL SCORE	1.9	0.9	2.0	1.0	1.9	0.9	1.9	0.9
B.	WORK-RELATED SCALE								
16.	Have other people recognize the work that I have done	2.1	0.8	2.0	0.9	2.1	0.8	2.0	0.8
38.	Be held in high esteem because of my work	2.2	0.9	2.2	0.9	2.3	0.8	2.1	0.9
60.	Have others think well of the work I do	1.9	0.7	1.9	0.8	1.9	0.7	1.9	0.7
82.	Be looked up to because of the work I do	2.2	0.8	1.5	0.6	2.3	0.9	2.1	0.8
104.	Be considered important because of my work	2.3	0.9	2.2	1.0	2.3	0.8	2.1	0.8
	OVERALL TOTAL SCORE	2.1	0.8	2.0	0.9	2.2	0.8	2.1	0.8

TABLE 17

RESULTS FOR SUBJECTS ON RESPONSIBILITY

RESPONSIBILITY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
17. Be in a position to make decisions	2.0	0.7	1.6	0.7	2.0	0.7	1.9	0.8
39. Be able to handle my responsibilities	1.3	0.5	1.2	0.5	1.3	0.5	1.3	0.6
61. Be responsible for my own mistakes	1.8	0.7	1.7	0.7	1.8	0.7	1.7	0.6
83. Be able to decide what to do with my life	1.5	0.6	1.4	0.6	1.6	0.7	1.5	0.6
105. Be responsible for my own actions	1.7	0.6	1.6	0.6	1.7	0.7	1.7	0.6
OVERALL TOTAL SCORE	1.7	0.7	1.5	0.6	1.7	0.7	1.6	0.7
B. WORK-RELATED SCALE								
17. Be responsible for doing my work well	1.6	0.6	1.4	0.6	1.6	0.6	1.5	0.6
39. Receive both credit for my successes and the blame for my mistakes on the job	1.8	0.6	1.8	0.8	1.8	0.7	1.7	0.6
61. Have responsibility for what others will do at work	2.8	0.9	3.2	1.0	2.7	0.9	2.7	1.0
83. Be judged by the results of my work	2.1	0.9	2.2	1.0	2.0	0.8	2.0	0.8
105. Be my own boss	2.6	0.9	2.7	1.1	2.5	0.9	2.4	1.0
OVERALL TOTAL SCORE	2.2	0.9	2.3	1.1	2.1	0.9	2.1	0.9

TABLE 18

RESULTS FOR SUBJECTS ON RISK-TAKING AND SAFETY

	RISK-TAKING AND SAFETY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
		Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A.	GENERAL VALUES SCALE								
18.	Feel the thrill of danger	3.6	1.1	3.2	1.3	3.4	1.2	3.4	1.1
40.	Try something even when there is a chance of failure	2.1	0.8	2.1	0.8	2.0	1.8	2.0	0.8
62.	Take on new things which may involve some risk for me	2.5	0.9	2.7	1.1	2.6	1.0	2.5	0.9
84.	Do interesting things that might involve failure	2.5	0.9	2.5	1.0	2.7	0.9	2.6	1.0
106.	Try things even when I am not sure what the outcome will be	2.3	0.8	2.3	0.8	2.4	0.8	2.3	0.9
	OVERALL TOTAL SCORE	2.6	1.0	2.5	1.1	2.6	1.0	2.6	1.0
B.	WORK-RELATED SCALE								
18.	Have work where I can take chances in choosing how I do it	2.2	0.9	2.2	0.9	2.4	0.9	2.1	0.9
40.	Have great challenge in my work	2.0	0.8	2.1	0.9	2.1	0.9	2.0	0.8
62.	Know that there is some kind of danger in the work that I do	3.2	1.2	2.4	1.2	2.8	1.3	3.1	1.3
84.	Be able to run risks at work when there	2.6	1.0	2.2	0.9	2.7	0.9	2.6	1.1
106.	Have my skills be crucial in avoiding dangers involved in my work	2.7	1.0	2.5	1.0	2.3	1.0	2.5	1.0
	OVERALL TOTAL SCORE	2.5	1.0	2.3	1.0	2.5	1.0	2.4	1.1

TABLE 19

RESULTS FOR SUBJECTS ON SPIRITUAL VALUES

SPIRITUAL VALUES	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
19. Do things which improve our society	2.1	0.8	1.9	0.8	1.9	0.7	2.0	0.7
41. Feel close to nature	2.3	1.0	2.1	1.0	2.2	0.9	2.3	1.1
63. Feel close to something or someone greater than me	2.4	1.0	2.7	1.1	2.2	1.0	2.4	1.0
85. Cultivate my inner life	2.3	0.9	1.8	0.8	2.4	0.9	2.1	0.9
107. Live according to my ideals	1.8	0.7	2.0	0.9	2.0	0.8	1.9	0.8
OVERALL TOTAL SCORE	2.2	0.9	2.1	1.0	2.1	0.9	2.1	0.9
B. WORK-RELATED SCALE								
19. Be able to contribute to the improvement of society through my work	2.2	0.8	2.0	0.8	2.3	0.8	2.1	0.9
41. Do work that, in some way, furthers the welfare and peace of the world	2.4	0.9	2.0	1.0	2.3	0.9	2.3	0.9
63. Stand up for my ideals in my work	1.9	0.7	2.0	0.9	1.9	0.7	1.9	0.8
85. Work in a way that makes the world a better place	2.3	0.8	2.2	1.0	2.2	1.0	2.2	0.9
107. Work in a way that is fair and just to my fellow workers	1.8	0.7	1.5	0.6	1.8	0.8	1.8	0.7
OVERALL TOTAL SCORE	2.1	0.8	2.0	0.9	2.1	0.9	2.1	0.9

TABLE 20

RESULTS FOR SUBJECTS ON SUPERVISORY RELATIONS

SUPERVISORY RELATIONS	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
20. Know that I am judged by reasonable standards	1.8	0.7	2.2	0.9	1.8	0.8	1.8	0.6
42. Be treated with consideration by others	1.7	0.6	1.6	0.7	1.6	0.7	1.6	0.7
64. Be able to trust those in charge	1.7	0.7	1.7	0.9	1.6	0.7	1.6	0.7
86. Feel that the people who count in my life can understand my point of view	1.7	0.7	1.6	0.7	1.7	0.7	1.7	0.7
108. Know that I will be backed up when I do something	2.0	0.8	2.1	0.9	2.0	0.8	2.0	0.8
OVERALL TOTAL SCORE	1.8	0.7	1.8	0.9	1.7	0.8	1.8	0.7
B. WORK-RELATED SCALE								
20. Feel that am treated fairly at work	1.6	0.6	1.5	0.7	1.6	0.6	1.6	0.6
42. Know what is expected of me in my job	1.7	0.6	1.6	0.7	1.6	0.7	1.6	0.6
64. Feel that those who are in charge of my work are friendly to me	1.8	0.6	1.6	0.8	1.9	0.7	1.8	0.8
86. Be responsible to supervisors who know what they are doing	1.9	0.8	2.2	1.0	2.0	0.9	1.9	0.9
108. Know what the people in charge think of me	1.8	0.7	1.9	0.8	1.7	0.7	1.8	0.7
OVERALL TOTAL SCORE	1.8	0.7	1.8	0.8	1.7	0.7	1.7	0.7

TABLE 21

RESULTS FOR SUBJECTS ON VARIETY

VARIETY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. GENERAL VALUES SCALE								
21. Travel	2.3	1.0	2.3	1.1	2.4	1.1	2.1	0.9
43. Have every day be different in some way from the one before it	2.4	0.9	2.4	0.9	2.4	0.9	2.3	0.9
65. Do a number of different things during the day	2.1	0.8	2.2	0.9	2.2	0.8	2.1	0.7
87. Be able to go to different places	2.1	0.9	2.1	0.9	2.1	0.9	1.9	0.9
109. Deal with a variety of people	2.0	0.8	2.1	0.9	2.1	0.8	2.1	0.8
OVERALL TOTAL SCORE	2.2	0.9	2.2	1.0	2.2	0.9	2.1	0.9
B. WORK-RELATED SCALE								
21. Change work activities frequently	2.6	0.9	2.6	1.0	2.7	0.9	2.5	0.9
43. Move around while I do things at work	2.3	0.9	1.9	0.9	2.3	0.9	2.4	0.9
65. Be able to do my work in a variety of ways	2.1	0.7	2.3	0.9	2.2	0.8	2.0	0.7
87. Be able to change my work pace, tempo or rhythm	2.3	0.8	2.1	0.8	2.3	0.9	2.1	0.7
109. Be able to change the task I am doing or how to do it	2.2	0.8	2.0	0.8	2.2	0.8	2.1	0.7
OVERALL TOTAL SCORE	2.3	0.8	2.2	0.9	2.3	0.9	2.2	0.8

TABLE 22

RESULTS FOR SUBJECTS ON CULTURAL IDENTITY

CULTURAL IDENTITY	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE		IMMIGRANT	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
A. **GENERAL VALUES SCALE**								
22. Live where people of my religion and race are accepted	2.5	1.2	2.0	1.0	2.4	1.2	2.6	1.2
44. Celebrate the special holidays of my religious or ethnic group	2.8	1.1	2.8	1.2	2.6	1.1	2.8	1.1
66. Live among people who are of the same ethnic or racial origin as I am	3.4	1.1	3.4	1.2	3.4	1.1	3.4	1.1
88. Maintain a strong cultural identity with my ethnic group	3.1	0.9	2.7	1.0	2.8	1.1	3.0	1.1
110. Be able to use my own language whenever I want	1.9	1.0	1.8	1.0	2.0	1.1	2.3	1.1
OVERALL TOTAL SCORE	2.7	1.2	2.6	1.2	2.7	1.2	2.8	1.2
B. **WORK-RELATED SCALE**								
22. Work where people of my ethnic origin have good job possibilities	3.1	1.1	2.5	1.1	2.8	1.1	3.1	1.1
44. Work where I am free from discrimination	1.9	0.9	1.7	1.0	1.8	1.0	1.8	0.8
66. Work in a language of my choice	1.9	1.0	1.9	1.1	1.9	1.0	2.3	1.1
88. Work with others from the same ethnic or cultural background as mine	3.4	1.0	3.1	1.3	3.3	1.2	3.3	1.0
110. Feel accepted at work as a member of my race or ethnic group	2.5	1.2	1.8	1.0	2.2	1.2	2.5	1.2
OVERALL TOTAL SCORE	2.6	1.2	2.2	1.2	2.4	1.2	2.6	1.2

TABLE 23

RANK ORDERING OF VALUES ON GENERAL VALUES INVENTORY

IMPORTANCE OF VALUE	MAJORITY ANGLOPHONE CANADIAN		FRANCOPHONE CANADIAN		NATIVE CANADIAN		IMMIGRANT CANADIAN	
IGH Mean of 1.9 or less)	1.	Economic Security	1.	Responsibility	1.	Economic Security	1.	Economic Security
	2.	Life Style	2.	Ability Utilization	2.	Ability Utilization	2.	Advancement
	3.	Ability Utilization	3.	Economic Security	2.	Achievement	2.	Achievement
	3.	Responsibility	4.	Achievement	2.	Advancement	2.	Life Style
	5.	Achievement	4.	Advancement	2.	Life Style	2.	Responsibility
	5.	Advancement	4.	Associates and Social Interaction	2.	Responsibility	6.	Ability Utilization
	5.	Associates and Social Interaction	4.	Life Style	2.	Supervisory Relations	7.	Supervisory Relations
	5.	Supervisory Relations	8.	Altruism	8.	Associates and Social Interaction	8.	Autonomy
	19.	Autonomy	8.	Supervisory Relations	9.	Autonomy	9.	Associates and Social Interaction
	10.	Participation in Organizational Decision Making	10.	Autonomy	9.	Intellectual Stimulation	9.	Intellectual Stimulation
	11.	Prestige	10.	Participation in Organizational Decision Making	9.	Participation in Organizational Decision Making	9.	Participation in Organizational Decision Making
					12.	Altruism	12.	Prestige
					12.	Prestige		

TABLE 23 (cont.)

RANK ORDERING OF VALUES ON GENERAL VALUES INVENTORY

IMPORTANCE OF VALUE	MAJORITY ANGLOPHONE CANADIAN	FRANCOPHONE CANADIAN	NATIVE CANADIAN	IMMIGRANT CANADIAN
MODERATE (Mean of 2.0 to 2.4)	12. Environment	12. Aesthetics	14. Environment	13. Altruism
	12. Intellectual Stimulation	12. Environment	15. Spiritual Values	14. Environment
	14. Altruism	12. Intellectual	16. Variety	15. Spiritual Values
	15. Spiritual Values	12. Prestige	17. Creativity	15. Variety
	15. Variety	16. Creativity	18. Aesthetics	17. Creativity
	17. Creativity	16. Spiritual Values		18. Aesthetics
		18. Variety		19. Economic Rewards
LOW (Mean of 2.5 or greater)	18. Aesthetics	19. Risk-Taking and Safety	19. Economic Rewards	20. Authority
	19. Economic Rewards	20. Cultural Identity	20. Authority	21. Risk-Taking and Safety
	20. Authority	21. Authority Safety	21. Risk-Taking and Safety	22. Cultural Identity
	21. Risk-Taking and Safety	22. Economic Rewards	22. Cultural Identity	
	22. Cultural Identity			

TABLE 24

RANK ORDERING OF VALUES ON WORK-RELATED VALUES INVENTORY

IMPORTANCE OF VALUE	MAJORITY ANGLOPHONE CANADIAN	FRANCOPHONE CANADIAN	NATIVE CANADIAN	IMMIGRANT CANADIAN
HIGH (Mean of 1.9 or less)	1. Economic Security	1. Ability Utilization	1. Economic Security	1. Economic Security
	2. Ability Utilization	1. Economic Security	2. Achievement	2. Achievement
	2. Achievement	3. Achievement	2. Supervisory Relations	3. Ability Utilization
	2. Supervisory Relations	4. Altruism	4. Ability Utilization	3. Supervisory Relations
	5. Intellectual Stimulation	4. Associates and Social Interaction	5. Economic Rewards	5. Economic Rewards
	6. Economic Rewards	4. Supervisory Relations	6. Advancement	6. Advancement
		7. Economic Rewards	6. Environment	
		7. Environment		
		7. Intellectual Stimulation		
		7. Participation in Organizational Decision Making		

TABLE 24 (cont.)

RANK ORDERING OF VALUES ON WORK-RELATED VALUES INVENTORY

MODERATE (Mean of 2.0 to 2.4)	7. Participation in Organizational Decision Making 8. Environment 9. Prestige 9. Spritual Values 11. Advancement 11. Altruism 13. Creativity 14. Autonomy 14. Responsibility 16. Variety 17. Associates and Social Interaction 17. Life Style	11. Prestige 11. Spiritual Values 13. Aesthetics 13. Creativity 13. Life Style 16. Advancement 16. Variety 16. Cultural Identity 19. Autonomy 20. Responsibility 20. Risk-Taking and Safety	8. Intellectual Stimulation 9. Participation in Organizational Decision Making 10. Altruism 10. Responsibility 10. Spiritual Values 13. Creativity 13. Prestige 15. Associates and Social Interaction 16. Autonomy 16. Life Style 16. Variety 19. Cultural Identity	7. Altruism 7. Participation in Organizational Decision Making 9. Environment 10. Intellectual Stimulation 11. Prestige 12. Responsibility 12. Spiritual Values 14. Creativity 14. Variety 16. Autonomy 17. Life Style 18. Aesthetics 18. Associates and Social Interaction 20. Authority 21. Risk-Taking and Safety
LOW (Mean of 2.5 or greater)	19. Authority 20. Aesthetics 21. Risk-Taking and Safety 22. Cultural Identity	22. Authority	20. Aesthetics 20. Risk-Taking and Safety 22. Authority	22. Cultural Identity

TABLE 25

RANK ORDERING OF VALUES BY ALL GROUPS ON THE GENERAL VALUES INVENTORY

VALUE	OVERALL RANK	MAJORITY ANGLOPHONE CANADIAN	FRANCOPHONE CANADIAN	NATIVE CANADIAN	IMMIGRANT CANADIAN
Economic Security	1	1	2	1	1
Responsibility	2	3	1	2	2
Life Style	3	2	4	2	2
Ability Utilization	4	3	2	2	6
Achievement	4	5	4	2	2
Advancement	4	5	4	2	2
Supervisory Relations	7	5	8	2	7
Associates and Social Interaction	8	5	4	8	9
Autonomy	9	9	10	9	8
Intellectual Stimulation	10	12	12	9	9
Participation in Organizational Decision Making	10	10	10	9	9
Altruism	12	14	8	12	13
Prestige	12	11	12	12	12
Environment	14	12	12	14	14
Spiritual Values	15	15	16	15	15
Variety	16	15	18	16	15
Aesthetics	17	18	12	18	18
Creativity	18	17	16	17	17
Economic Rewards	19	19	22	19	19
Authority	20	20	21	20	20
Risk-Taking and Safety	21	21	19	21	21
Cultural Identity	22	22	20	22	22

TABLE 26

RANK ORDERING OF VALUES BY ALL GROUPS ON THE WORK-RELATED VALUES INVENTORY

VALUE	OVERALL RANK	MAJORITY ANGLOPHONE CANADIAN	FRANCOPHONE CANADIAN	NATIVE CANADIAN	IMMIGRANT CANADIAN
Economic Security	1	1	1	1	1
Achievement	2	2	3	2	2
Ability Utilization	3	2	1	4	3
Supervisory Relations	4	2	4	2	3
Economic Rewards	5	6	7	5	5
Environment	6	8	7	6	9
Intellectual Stimulation	6	5	7	8	10
Participation in Organizational Decision Making	6	7	7	9	7
Altruism	9	11	4	10	7
Advancement	10	11	16	6	6
Spiritual Values	11	9	11	10	12
Prestige	12	9	11	13	13
Creativity	13	13	13	13	13
Associates and Social Interaction	14	17	4	15	18
Responsibility	15	14	20	9	11
Variety	16	16	16	16	13
Life Style	17	17	13	16	16
Autonomy	18	14	19	16	16
Aesthetics	19	20	13	20	18
Cultural Identity	20	22	16	19	22
Risk-Taking and Safety	21	21	20	20	21
Authority	22	19	22	22	20

FACTOR ANALYSIS OF THE OCCUPATIONAL INTEREST QUIZ

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ABSTRACT & INTRODUCTION

In order to test the structural validity of a new interest inventory, the Occupational Interest Quiz, data were collected from a cluster sample of 778 young adults and adults in five provinces. The Quiz has 90 dichotomous (yes/no) questions, ten items for each of nine hypothesized factors.

Because of the dichotomous nature of the data, a tetrachoric correlation matrix was obtained. This correlation matrix was submitted to a principal components analysis, the findings of which were used for a subjective scree test to estimate the number of factors. The scree test suggested a solution with a minimum of five factors. The data were then resubmitted for a principal axes analysis using Varimax rotation, and solutions obtained for five through nine factors. The five-factor solution allowed for the most parsimonious interpretation of the data.

Some suggestions for modifications to increase the efficiency of the instrument and suggestions for further research are presented.

METHODOLOGY

Instrument Development

The theoretical background for hypothetical factors in the Occupational Interest Quiz rests in the well-known Holland codes. Holland's theory proposes that there are six types of personality orientations involved in occupational interests: Social (S), Realistic (R), Investigative (I), Artistic (A), Enterprising (E), and Conventional (C).

In the development of the Occupational Interest Quiz, it was hypothesized that there are six temperaments which correspond roughly to the Holland codes. These six temperaments were considered to be:

1. Gregarious, which involves helping people and business contact with people; this factor corresponds roughly to Holland's S.
2. Nonsocial, which involves an interest in working with things, machines, data; this corresponds to Holland's R.
3. Objective, an interest in scientific activities, corresponding to Holland's I.
4. Creative, an interest in artistic endeavours, corresponding to Holland's A.

5. Dominant/versatile, an interest in controlling and directing activities, and a like for variety and change in working situations, corresponding to Holland's E.
6. Conforming/concrete, a preference for routine activities, and taking direction, corresponding to Holland's C.

When Holland's orientations are considered to be bipolar, there are three linear factors: Investigative/Artistic, Enterprising/Conventional, and Social/Realistic. For purposes of the present research, an additional factor was hypothesized: Dominant/Conforming. In addition, it was decided to test the possibility that dominant/versatile are two separate factors, and that conforming/concrete are two separate factors. Finally, it was hypothesized that the Gregarious factor may actually involve two components: one which involves social welfare, and notions of helping people, and a second which involves enjoyment of business contact with people.

Ninety items were written by a panel of consultants, ten items for each of the nine hypothesized factors:

Gregarious (Business contact)
People-Oriented (Helping)
Nonsocial
Objective
Creative
Dominant
Versatile
Conforming
Organized (Concrete).

These items were written with the intention of maintaining a relatively easy reading level, and were written so that they could elicit dichotomous responses (yes/no). The items were arranged on a questionnaire in a rotating order to facilitate self-scoring. The first item in each cluster of nine was for the hypothesized factor Organized (Concrete), followed by Gregarious (Social, business contact), Dominant, Creative, Conforming, People-Oriented (Helping), Objective, Nonsocial, and Versatile. This ordering was determined only by the desirability of separating the two "social" factors (Gregarious and People-Oriented). A copy of the Quiz will be found in Appendix A.

In order to make completing the Quiz more attractive to participants in the research, a separate Self-Scoring Guide was designed. This Guide was written in a reading level corresponding to the reading level of the items in the Quiz. It provided instructions to participants for scoring their own quiz, and a few suggested occupations which correspond to the hypothesized factor structure, to enable participants to interpret their results. A copy of the Self-Scoring Guide will be found in Appendix B.

Sample

A cluster sample was arranged, and an effort was made to obtain data from persons with a variety of characteristics. A summary of the demographic characteristics of participants in the study have been entered in the Quiz located in Appendix A. The total sample for the validation study was 778. It will be noted that the sample is approximately 55% female. Persons aged 16 - 19 and 20 - 24 are most heavily represented in the sample, although 70 participants were over the age of 40.

Approximately 64% of the sample stated that they are currently students, while the remaining portion of the sample is equally divided between employed and unemployed persons. For employed and unemployed persons, two-thirds of the respondents have been in the labour force for more than one year. The mean number of years of education for all respondents is 10.85.

Approximately 43% of the sample was from British Columbia, 23% from Newfoundland and Labrador, 17% from Ontario, 10% from Manitoba, and 7% from Saskatchewan.

The sample represented a wide variety of CEIC clients and programs, including a Women's Employment Counselling Unit, Career Action for Youth Centre, Special Needs Unit, Specialized Youth Unit, and Youth Employment Service. BTSD students at Vancouver Community College and Regina Plains Community College also participated in the study, as well as adult upgrading students from the College of Fisheries, Navigation, Marine Engineering and Electronics (St. John's, Newfoundland).

University students enrolled in courses in Educational Psychology and Test Administration at Memorial University of Newfoundland also took part in the study. Through the cooperation of the Toronto Board of Education, secondary school students at Oakwood Collegiate Institute and West Toronto Secondary School completed the Quiz during career guidance sessions. Finally, a number of employed adults, primarily from Manitoba, completed the Quiz.

It is noteworthy that 92% of the respondents stated that they did not have any difficulty reading the Quiz. In addition, it can be hypothesized that the Quiz is viewed as interesting and motivating, as 93% of the participants indicated that they intended to use the Self-Scoring Guide to score their own Quiz.

Procedure

For each "cluster" of persons in the sample, a contact was made with an appropriate administrator who handled the distribution of the Quiz and the Self-Scoring Guide. Directions for completing the Quiz and the Guide had been designed to be self-explanatory so that supervision would not be required, consistent with the aims of the final instrument. There were no reports of difficulties in reading or completing either document.

Completed copies of the Quiz were returned through the administrators to the Educational Research Institute. Participants were encouraged to keep the Self-Scoring Guide for their own use.

Data Analysis

Data were keypunched and submitted to factor analysis.

Because the data collected were based on dichotomous (yes/no) items, it was necessary to calculate tetrachoric correlations of items.

In order to estimate the maximum number of factors for extraction and rotation, a subjective scree test was performed. The scree test is commonly accepted as a simple empirical rule for determining the number of factors it is "worthwhile" to extract from a correlation matrix. In order to determine the number of factors for extraction, it is common practice to use a principal components analysis (Mulaik, 1972) to obtain eigenvalues. This practice was followed in the data analysis described here. The eigenvalues obtained from the principal components analysis of the tetrachoric correlations were arranged in decreasing order and then plotted against their indices. The plot is presented in Figure 1.

According to criteria determined by Cattell (1966), and generally in use for subjective scree tests, subjectively determined "regression lines" are added to the plotted values and are used to estimate the maximum number of factors for extraction. Inspecting the plotted values suggested that it would be worthwhile extracting a minimum of five factors.

The data were then submitted for reanalysis using a principal axes method (Mulaik, 1972), substituting estimated R^2 values in the diagonal as suggested by Guttman (1956), Harman (1967) and Kerlinger and Pedhasur (1973). Varimax rotation was then performed on the factor matrix, beginning at nine extracted factors (nine being the number of hypothesized factors), and decreasing the number of factors to five (five being the minimum number suggested by the scree test).

The resulting factor matrices were inspected with regard to the proportion of total variance accounted for, the variance accounted for by each factor, and the conceptual clarity of the factor loadings.

The solution at nine factors was rejected primarily because of the negligible amount of variance loading on the last three factors. The solutions at eight factors and at seven factors were rejected because of the small amount of variance loading on the last factor in each of those solutions. Even at six factors, the proportion of common

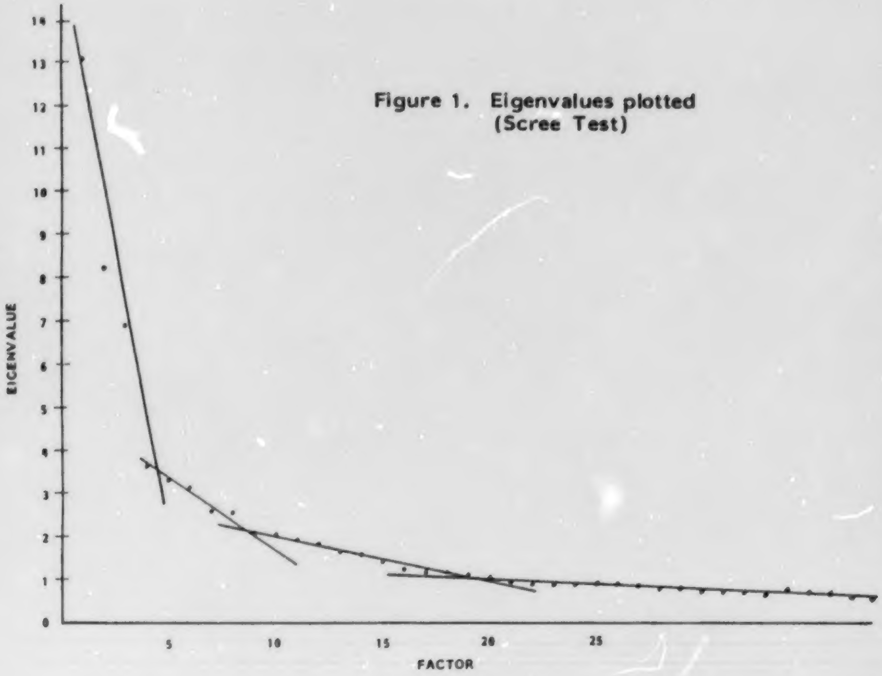

Figure 1. Eigenvalues plotted
(Scree Test)

variance accounted for by the last factor was less than 10%. At five factors, the proportion of common variance accounted for by the last factor increased to 17%. In addition, the factor loadings for the five factor solution were conceptually clearer than the loadings for any of the solutions with a greater number of factors.

Therefore, the five factor solution was accepted as the most parsimonious and satisfactory solution, and is reported here.

RESULTS

Communalities and factor loadings for all 90 items of the Quiz are presented in Table 1. Communalities, denoted by H^2, indicate the proportion of variance for a given item which is accounted for by the combination of the five factors. Factor loadings essentially represent the "weight" of the contribution of a given item to each extracted factor. Because of the great number of items on the Quiz, and for ease of visual interpretation, only factor loadings of greater than 0.40 are underscored. However, it should be noted that traditionally factor loadings exceeding 0.30 are considered to be significant.

Inspecting those items with loadings of 0.40 or over, Factor 1 contains all the items from the hypothesized "Dominant" factor (items 3, 12, 21, 30, 39, 48, 57, 66, 75 and 8[illegible]). In addition, it contains three "Versatile" items (63, 72 and 90), two "Gregarious (Business)" items (47 and 56), one "People-oriented (Helping)" item (78) and one "Creative" item (85). It seems reasonable, based on these items, to consider this factor as a "Dominant" factor. Addition of items with factor loadings between 0.30 and 0.40 adds one additional "Dominant" item (84), two "Versatile" items (45 and 81), two "Gregarious (Business)" items (20 and 65), one "Organized/Concrete" item (82), and one "Conforming" item (86).

Factor 2 consists primarily of the two person-oriented categories, "Gregarious (Business)" items (38, 56, [illegible] 74 and 83), and "People-oriented (Helping)" items (15, 24, [illegible] 51, 60, 69 and 87). It is apparent that the two social, [illegible] person-oriented factors did not split as hypothesized [illegible] broader "Social" factor provides a better explanation [illegible] the data. When items with loadings between 0.30 and [illegible] are included, two "People-oriented (Helping)" items [illegible] added (6 and 78), as well as one "Gregarious (Business)" item (2), one "Conforming" (50), one "Nonsocial" (62), one "Dominant" (66), and one "Versatile" (72). The apparent misplacement of item 62 ("Nonsocial") may be explained by its content, which is related to enjoyment of solitary crafts, but appears not to be related to other "Nonsocial" items which appear in Factor 5.

Table 1. Rotated Factor Matrix, Five Factor Solution

		FACTOR LOADING				
ITEM	H^2	1	2	3	4	5
1	0.379	0.026	-0.062	0.609	0.055	0.010
2	0.233	0.297	0.367	0.053	0.088	-0.016
3	0.564	0.740	0.052	-0.012	0.062	0.099
4	0.222	-0.024	0.067	-0.363	0.292	0.015
5	0.410	-0.007	-0.024	0.581	0.264	-0.046
6	0.219	0.167	0.363	0.029	0.241	0.010
7	0.224	0.163	-0.023	0.097	0.243	0.359
8	0.717	0.127	-0.236	0.112	0.136	0.784
9	0.301	0.218	0.206	-0.090	0.427	-0.143
10	0.167	0.194	-0.114	0.281	0.167	-0.098
11	0.098	0.256	0.130	-0.066	-0.022	0.104
12	0.326	0.486	-0.092	0.169	0.219	0.068
13	0.153	0.249	-0.047	-0.204	0.102	0.191
14	0.324	-0.199	0.020	0.505	-0.169	0.019
15	0.298	0.248	0.467	-0.109	-0.081	-0.007
16	0.189	-0.062	-0.004	0.034	0.387	0.186
17	0.246	-0.057	0.118	0.037	0.330	0.345
18	0.271	0.225	-0.004	-0.354	0.299	0.072
19	0.397	0.006	-0.056	0.603	0.166	0.046
20	0.143	0.355	0.072	-0.105	0.020	0.008
21	0.390	0.582	0.186	-0.111	0.035	-0.051
22	0.494	0.218	-0.044	-0.183	0.339	0.544
23	0.376	-0.086	0.154	0.576	-0.093	-0.073
24	0.346	0.005	0.532	0.190	0.051	0.157
25	0.327	0.236	0.295	0.124	0.405	0.073
26	0.179	0.119	-0.110	-0.002	0.388	0.048
27	0.206	0.021	0.202	-0.365	0.176	0.032
28	0.191	-0.055	0.005	0.422	0.026	0.099
29	0.136	0.168	0.282	0.020	0.148	-0.076
30	0.532	0.642	0.167	0.001	0.297	-0.062
31	0.348	0.299	-0.051	-0.090	0.383	0.318

Table 1. Rotated Factor Matrix, Five Factor Solution (cont'd.)

		FACTOR LOADING				
ITEM	H^2	1	2	3	4	5
32	0.419	-0.191	0.096	0.609	-0.024	0.050
33	0.524	0.160	0.654	0.088	0.249	-0.040
34	0.353	0.092	0.275	0.096	0.506	0.063
35	0.384	-0.024	-0.032	-0.007	0.335	0.520
36	0.278	0.122	0.099	-0.210	0.433	0.149
37	0.467	-0.123	-0.014	0.341	-0.379	0.438
38	0.297	0.247	0.462	-0.040	0.111	-0.091
39	0.479	0.626	0.259	-0.137	0.033	0.015
40	0.238	0.146	0.082	-0.231	0.292	0.268
41	0.371	-0.426	0.019	0.191	-0.363	0.143
42	0.303	-0.037	0.258	0.268	0.376	-0.149
43	0.282	0.068	0.139	0.083	0.492	0.095
44	0.724	0.082	-0.265	0.209	0.001	0.777
45	0.342	0.314	0.240	-0.087	0.420	0.044
46	0.289	-0.199	-0.009	0.240	-0.336	0.281
47	0.404	0.408	0.260	0.044	0.327	-0.137
48	0.291	0.406	0.051	0.071	0.344	-0.019
49	0.220	0.157	0.159	0.246	0.321	0.081
50	0.269	-0.094	0.323	0.369	-0.104	0.098
51	0.487	0.017	0.662	0.103	0.049	0.190
52	0.214	0.127	-0.215	0.277	0.266	0.059
53	0.587	0.019	-0.033	0.049	0.084	0.759
54	0.339	0.248	0.229	-0.423	0.211	0.033
55	0.645	-0.037	-0.243	0.343	-0.273	0.626
56	0.428	0.402	0.503	-0.030	0.028	-0.084
57	0.253	0.440	-0.016	0.162	0.042	0.175
58	0.538	0.055	0.284	-0.068	0.666	0.079
59	0.357	0.081	0.049	0.565	0.004	0.172
60	0.511	0.119	0.645	0.048	0.179	-0.216
61	0.382	0.211	0.055	0.035	0.532	0.223
62	0.276	-0.174	0.332	-0.052	0.181	0.316

Table 1. Rotated Factor Matrix, Five Factor Solution (cont'd.)

		FACTOR LOADING				
ITEM	H^2	1	2	3	4	5
63	0.448	0.595	0.198	-0.128	0.183	0.070
64	0.506	0.003	-0.191	0.666	-0.157	0.023
65	0.441	0.372	0.522	0.109	-0.096	0.094
66	0.564	0.640	0.358	-0.155	0.011	0.042
67	0.262	0.030	-0.194	-0.445	0.120	0.108
68	0.218	-0.055	0.030	0.452	0.092	0.034
69	0.521	0.008	0.709	-0.003	-0.019	-0.133
70	0.301	0.047	0.057	0.374	0.261	0.295
71	0.648	-0.076	0.005	0.033	0.053	0.799
72	0.371	0.433	0.381	-0.142	0.011	-0.134
73	0.381	-0.085	0.079	0.528	-0.199	0.222
74	0.513	0.226	0.647	-0.022	0.066	-0.197
75	0.609	0.761	0.018	-0.097	0.139	-0.007
76	0.425	0.293	-0.057	-0.157	0.381	0.408
77	0.269	-0.027	0.085	0.498	0.114	0.014
78	0.435	0.482	0.379	-0.196	0.066	-0.127
79	0.220	0.155	0.105	0.167	0.368	0.149
80	0.315	0.001	0.016	0.127	0.371	0.402
81	0.216	0.327	0.159	-0.118	0.262	0.030
82	0.311	-0.098	0.127	0.445	0.107	0.274
83	0.403	0.129	0.533	0.075	0.296	-0.096
84	0.316	0.449	0.186	0.030	0.258	-0.112
85	0.491	0.400	-0.056	-0.081	0.498	0.271
86	0.358	-0.085	0.228	0.544	0.061	-0.005
87	0.597	0.003	0.757	0.120	0.077	-0.058
88	0.206	-0.051	-0.057	0.355	0.166	0.217
89	0.685	-0.144	-0.594	0.291	-0.091	0.467
90	0.489	0.532	0.071	-0.244	0.376	0.031
	% COM VAR.	21.706	21.436	20.818	18.508	17.537
	% TOT VAR.	17.090	16.877	16.391	14.573	13.807

Factor 3 contains six of the original "Organized/ Concrete" items (1, 19, 28, 64, 73 and 82), and eight of the original "Conforming" items (5, 14, 23, 32, 59, 68, 77 and 86) with loadings greater that 0.40. Five items also load on this factor greater than 0.30: two "Organized/Concrete" (37 and 55), two "Objective" (70 and 88), and one "Conforming" (50). The possibility that "Concrete" and "Conforming" are separate factors is not supported in the present analysis.

Factor 4 contains items from a variety of hypothesized factors, primarily "Versatile" (9, 36 and 45), "Objective" (25, 34, 43 and 61), and "Creative" (58 and 85). Inspection of these items clarifies the relationship: the orientation measured by these items is directed towards problems-solving, experimentation, discovery, and creative activities. Many items load "lightly" on this factor. Items with loadings between 0.30 and 0.40 include four additional "Creative" items (22, 31, 49 and 76), four "Nonsocial" items (17, 26, 35 and 80), two "Objective"/Concrete" items (16 and 79). There are also four "miscellaneous" items loading on this factor: one each from "People-Oriented (Helping)" (42), "Gregarious (Business)" (47), "Dominant" (48), and "Versatile" (90).

Factor 5 contains seven original "Nonsocial" items with loadings of 0.40 or greater (items 8, 35, 44, 53, 71, 80 and 89). In addition it contains two "Creative" items (22 and 76) and two "Organized/Concrete" (37 and 55) items. This factor could be considered to be akin to the original "Nonsocial" factor. Addition of items with loadings between 0.30 and 0.40 adds two "Nonsocial" items (17 and 62), one "Objective/ Concrete" item (7), and one "Creative" item (31).

In summary, the five factor solution provides the best statistical and intuitive interpretation of the data. The five factors are Dominant, Social (Person-Oriented), Concrete/Conforming, Discovery/Experimental, and Nonsocial.

DISCUSSION

Since one goal in the development of any new instrument is to provide efficient measurement of the variable(s) in question, a logical next step in the development of the Occupational Interest Quiz would be the development of a shorter version. This shorter version could contain 50 items, 10 items to measure each of the five-factors. Items with highest loadings on each factor should be selected for the shorter version. Data should then be collected on the shorter version and analyzed in the same manner as the present study to ensure that the structural validity is maintained.

Establishment of structural validity is only a first step in the development of an interest inventory. Subsequent research to meet APA/- AERA/NCME standards should be undertaken before widespread use of the Occupational Interest Quiz. Having established structural validity, subsequent investigation should be undertaken to establish criterion (predictive and concurrent) validity. Concurrent validity is relatively easy to determine: a study could be undertaken to determine how the Quiz relates to other existing inventories, for example the COII.

Subjective reports from participants in the study generally indicate a high degree of interest in the Quiz and the results it provided for them. Given the small amount of time for administration of the Quiz, and the possiblility of an even shorter but psychometrically sound instrument, as well as the conceptual clarity of the factors even at this very early stage of development, further research is warranted.

REFERENCES

Cattell, R.B. The scree test for the number of factors. Multivariate Behavioral Research, 1966, 1, 245-276.

Guttman, L. 'Best possible' systematic estimates of communalities. Psychometrika, 1956, 21, 273-285.

Harman, H. Modern Factor Analysis (2nd ed.). Chicago: University of Chicago Press, 1967.

Kerlinger, F.N. and Pedhazur, E.J. Multiple Regression in Behavioral Research. Toronto: Holt, Rinehart, 1973.

Mulaik, S.A. The Foundations of Factor Analysis. Toronto: McGraw-Hill, 1972.

APPENDIX A
OCCUPATIONAL INTEREST QUIZ
RESEARCH FORM 1

Educational Research Institute of British Columbia

Employment and Immigration Commission, 1983

CIRCLE "YES" OR "NO" BESIDE EACH QUESTION TO BEST DESCRIBE YOURSELF

1. Do you like to do the same task until it is finished? YES NO
2. Are you comfortable meeting new people and making new friends? YES NO
3. Would you like a job where you could direct, control and plan the activities of other workers? YES NO
4. Do you like to have a lot of freedom when you do an assignment or job? YES NO
5. Do you usually follow directions carefully? YES NO
6. Can you discuss difficult subjects with people without hurting their feelings? YES NO
7. Do you enjoy playing chess or other games of problem solving? YES NO
8. Do you like to build things and/or repair them? YES NO
9. Do you enjoy having a lot of things to think about? YES NO
10. Do you find that you are more systematic and orderly than many other people? YES NO
11. Have you ever had a paper route, canvassed donations, or sold things door to door? YES NO
12. Do you like to take charge of things and get them done? YES NO
13. When you have been assigned a project or task, do you often do it differently from other people? YES NO
14. Would you like to have a job where you always know what is expected of you? YES NO
15. Do you do any volunteer work with organizations that help people? YES NO
16. Do you enjoy books and television programs on scientific subjects such as astronomy and biology? YES NO
17. Do you often enjoy staying home to work on a hobby? YES NO

18. Would you like a job in which you wouldn't know what to expect tomorrow or next week? YES NO

19. When you do a project or other job, do you do it carefully, one step at a time? YES NO

20. Do you enjoy persuading people to buy something or to see things your way? YES NO

21. Do you enjoy directing people in their activities? YES NO

22. Are you able to design, invent or create things? YES NO

23. Do you like to have established rules to work by? YES NO

24. Do you like to help your friends to solve their problems? YES NO

25. Do you like to dig deeply into topics to solve problems? YES NO

26. Do you like to work on projects by yourself? YES NO

27. Are you usually able to drop what you are doing to start something new and entirely different? YES NO

28. Do you enjoy working at the same thing for a long time? YES NO

29. Do you find it easy to make appointments or discuss business over the telephone? YES NO

30. Would you like a job where you can take responsibility for decisions? YES NO

31. Do you have a good imagination? YES NO

32. Do you enjoy working according to prescribed methods? YES NO

33. Are you able to help people who are worried or upset? YES NO

34. Do you like to go through evidence to solve problems? YES NO

35. Do you enjoy hobbies you can do on your own, such as building models, gardening, refinishing old furniture, or developing photographs? YES NO

36. Would you enjoy a job where each day is spent doing things that are new and different? YES NO

37. Would you like to do an assembly line job? YES NO

38. Would you like a job interviewing people to get their opinions about things or events? YES NO

39. Have you ever been the leader of a club, committee, team or organization? YES NO

40. Do you think you have musical, artistic, or dramatic ability? YES NO

41. Would you like to have a job which does not require you to plan and make decisions yourself? YES NO

42. Are you a good listener? YES NO

43. Would you like to work on research projects? YES NO

44. Do you enjoy working with tools and machinery? YES NO

45. Are you able to deal with new and unexpected things happening all the time? YES NO

46. Would you like to have a job which could be done more or less automatically? YES NO

47. Are you able to explain things clearly to other people? YES NO

48. Are you considered to be self-confident and independent? YES NO

49. Do you enjoy studying or taking courses which stress the theory of the subject? YES NO

50. Do you like to do things for others just the way they want them to be done? YES NO

51. Do you like to assist people when they are sick or in trouble? YES NO

52. Are you good at science and mathematics? YES NO

53. Do you enjoy working with materials such as wood, stone, clay, fabric or metal? YES NO

54. Do you often have several things going on at one time? YES NO

55. Would you like to have a job operating machinery all day? YES NO

56. Would you like to be a committee member of a club or organization? YES NO

57. Are you competitive? YES NO

58. Would you like to work on projects that allow you to discover new facts or ideas? YES NO

59. Would you like a job where your work is usually closely checked and inspected? YES NO

60. Would you like a job that is involved with social betterment? YES NO

61. Do you enjoy experimenting with different methods to accomplish something or to solve a problem? YES NO

62. Do you enjoy doing crafts such as macrame, weaving, ceramics, or leather tooling? YES NO

63. Have you ever been responsible for a project or activity and had to look after many different details to complete it? YES NO

64. Do you like to finish one job before you start the next? YES NO

65. Are you usually active in social groups or activities? YES NO

66. Have you ever been responsible for organizing an activity and planning something for everyone to do? YES NO

67. Do ordered and systematic activities bore you? YES NO

68. Are you able to follow instructions without questioning them? YES NO

69. Would you like a job that is involved with community service? YES NO

70. Would you like a job where you use statistics to solve problems? YES NO

71. Do you like working with your hands, doing things such as plumbing repairs, fixing cars, sewing or wallpapering? YES NO

72. Do you belong to one or more groups or organizations? YES NO

73. Would you like to have a job where you worked at a steady pace all day? YES NO

74. Would you like a job where you had to deal with people all day? YES NO

75. Do you prefer being in control of a group rather than being just a member? YES NO

76. Would you consider yourself to be a creative person? YES NO

77. Are you able to take orders?

78. Have you ever been a Sunday School teacher, a counsellor at camp, or instructed groups of people? YES NO

79. Do you enjoy activities which give you the opportunity to test and measure in some way? YES NO

80. Do you enjoy finding out from books and TV programs how things are made or how things work? YES NO

81. Are you usually pleased at being faced with unfamiliar places and circumstances? YES NO

82. Would you like to operate a word processor or enter data into a computer? YES NO

83. Do you find it easy to work with people and to cooperate with them? YES NO

84. Are you usually successful in getting people to do what you want? YES NO

85. Do you like to solve problems or do projects using your own ideas? YES NO

86. Are you considered an obedient person? YES NO

87. Do you enjoy looking after people? YES NO

88. Would you like a job in which you could use computers as a basis for making decisions? YES NO

89. Would you like a job in which you worked with machines or things rather than dealing with people? YES NO

90. Would you like a job where you are responsible for organizing your own activities the way you see fit? YES NO

PERSONAL DATA

1. Sex

342 Male
423 Female
13 No response

2. How old are you?

70 15 or younger
207 16 - 19
203 20 - 24
89 25 - 29
127 30 - 39
43 40 - 49
27 50 or over
12 No response

3. What language do you speak? (If you speak more than one, what language do you prefer to use?)

750 English
1 French
12 Other (please specify):
15 No response

4. Which one of the following best describes what you are doing now? Please place a check __ beside one choice.

487 Full-time student
142 Employed
135 Unemployed
14 No response

5. If you answered "Student" above, please check the level of education you are now in.

89 junior high school
103 senior high school
161 community college
99 university
326 No response

6. What is the total number of years of education you have completed successfully?

134 up to 8
281 9 - 11
167 12 - 13 $\bar{X}$ = 10.85
117 14 - 16 SD = 1.17
59 17 or more
20 No response

7. If you are working (full-time or part-time), how long have you worked?

59	less than six months
55	6 months - one year
104	1 year - 5 years
130	more than 5 years
430	No response

8. In what province or territory do you live?

N	%	
0	0	Alberta
320	42.8	British Columbia
76	10.0	Manitoba
0	0	New Brunswick
178	23.4	Newfoundland and Labrador
1	0.1	Northwest Territories
0	0	Nova Scotia
126	16.6	Ontario
0	0	Prince Edward Island
2	0.3	Québec
50	6.6	Saskatchewan
1	0.1	Yukon
18	--	No response

NOW WE WOULD LIKE TO ASK YOU A FEW QUESTIONS ABOUT THE QUIZ

	56	674	48
1. Did you have any problems reading the questions?	YES	NO	No response

If you answered "Yes", which questions were hard to read? ______________________

____

____

	674	54	50
2. Do you plan to score your own quiz?	YES	NO	No response

If you answered "No", why not? ______________________

____

____

3. Do you have any other comments or suggestions to make? ______________________

____

____

THANK YOU FOR COMPLETING THIS QUIZ.

IF YOU WOULD LIKE TO SCORE THE QUESTIONNAIRE, YOU ARE NOW READY TO USE THE GUIDE.

APPENDIX B

OCCUPATIONAL INTEREST QUIZ, SELF-SCORING GUIDE
RESEARCH FORM 1

Educational Research Institute of British Columbia
Employment and Immigration Commission, 1983

A NOTE ABOUT THE QUIZ

We are still doing research on this interest quiz. We think that we can measure your interests reasonably well, and that the results of this quiz should be interesting to you. We hope that the results will help you to think about the possibility of occupations you hadn't thought about before.

We appreciate the time you took to do this quiz: your help will give us more knowledge about how well this quiz actually works.

SCORING YOUR QUIZ

It is fairly easy to score your own quiz. Just follow the step-by-step directions.

STEP 1

On the list of numbers below, circle the number for any question you answered YES. For example, if you answered YES to questions 1, 3 and 4, then circle 1, 3 and 4 on the chart below.
Ignore all the questions where you circled NO! Be sure you work down the page.

1 + 10 + 19 + 28 + 37 + 46 + 55 + 64 + 73 + 82 = ____(1)
2 + 11 + 20 + 29 + 38 + 47 + 56 + 65 + 74 + 83 = ____(2)
3 + 12 + 21 + 30 + 39 + 48 + 57 + 66 + 75 + 84 = ____(3)
4 + 13 + 22 + 31 + 40 + 49 + 58 + 67 + 76 + 85 = ____(4)
5 + 14 + 23 + 32 + 41 + 50 + 59 + 68 + 77 + 86 = ____(5)
6 + 15 + 24 + 33 + 42 + 51 + 60 + 69 + 78 + 87 = ____(6)
7 + 16 + 25 + 34 + 43 + 52 + 61 + 70 + 79 + 88 = ____(7)
8 + 17 + 26 + 35 + 44 + 53 + 62 + 71 + 80 + 89 = ____(8)
9 + 18 + 27 + 36 + 45 + 54 + 63 + 72 + 81 + 90 = ____(9)

STEP 2

Now count how many numbers you have circled on each line, and write the total on the right hand side of the chart, beside the numbers in brackets.

STEP 3

Now pick two or three lines with your highest scores. These are probably good indications of your interests. The number in brackets will tell you what section to read on the next few pages. Say, for example, your highest scores are on lines (1) and (6), you will want to read about (1) ORGANIZED and (6) PEOPLE-ORIENTED (HELPING). You will find descriptions of the interests, and a few occupations for each interest, starting on the next page.

1. ORGANIZED

Organized persons enjoy regular routine and like to be free from the unexpected. They have the ability to continue the same task without diversion; to proceed with work in strict adherence to a work procedure or established pace set by machine or another worker. They have a high tolerance for sameness, prefer to experience activity in a set order and like to do one thing at a time. They prefer activities which are organized and routine and which deal with the concrete.

The following are examples of occupations which are considered to be organized:

store clerk
cashier
sewing-machine operator
assemble
telephone operator
word-processor operator
proofreader
mail clerk

2. GREGARIOUS (SOCIAL)

Gregarious persons enjoy dealing with other people in a social or business sense. They are able to contact others in a successful manner and to achieve positive acceptance in a group. They prize agreeable working relationships. They like to be in the company of others and are not inclined to enjoy working alone. They find it pleasurable to meet and get to know people.

The following are examples of occupations which are considered to be gregarious (social):

public relations representative
flight attendant
recreation leader
travel, sightseeing guide
dancing instructor
reporter
receptionist
sales agent

3. DOMINANT

Dominant persons like to prevail or control and want to play a part in shaping the environment. They like to obtain responsibility for activities which require planning, decision-making and directing. They thrive on competition. They are easily able to direct others, give instructions, orders or commands. They enjoy taking initiative, imposing their own style, or making their own program. They see themselves as independent and self-directing, and like to be 'boss'.

The following are examples of occupations which are considered to be dominant:

- bank manager
- chef
- architect
- construction superintendent
- producer, broadcaster
- hotel manager
- pilot
- recreation director

4. CREATIVE

Creative persons enjoy activities which deal with ideas: for example, qualitative judgements in the arts, social service, and science. They like to look for broad meanings, generalizations and abstractions. They enjoy arriving at new solutions to problems or to achieve ideal representations. Self-expression is very important to creative persons and they prefer pursuits which permit individuality of taste, projection of personality and/or adherence to personal values. They prefer to work with their own ideas rather than those of others and are very much aware of their own taste and viewpoints. They don't mind being different, and prefer not to imitate.

The following are examples of occupations which are considered to be creative:

- commercial design artist
- sculptor
- floral arranger
- dancer
- photographer
- interior designer
- writer
- hairdresser

5. CONFORMING

Conforming persons enjoy doing things based on the decisions of others. They prefer to act according to instructions of others and like performing tasks that do not require planning or making decisions on their own.

The following are examples of occupations which are considered to be conforming:

- social services assistant
- construction worker
- clerk
- engineering technician
- teller
- cook's helper
- machine feeder
- orderly

6. PEOPLE-ORIENTED (HELPING)

People-oriented or 'helping' persons share the same characteristics as gregarious (social) persons but like to get more involved with others so as to help them. These persons have a preference for working with people for their presumed good, as in the social welfare sense.

The following are examples of occupations which are considered to be people-oriented (helping):

social worker
counsellor
occupational therapist
doctor
nurse
teacher
parole officer
minister of religion

7. OBJECTIVE

Objective persons enjoy problem-solving that is approached rationally and feel that conclusions should be grounded upon concrete evidence, measurement and verification. They require a methodology that involves standardized observing processes. They prefer activities of a scientific or technical nature, and for finding things out on their own initiative. They usually have a curiosity about natural phenomena and what causes them.

The following are examples of occupations which are considered to be objective:

computer programmer
engineer
laboratory technician
mathematician
community planner
geologist
psychologist
opthalmologist

8. NONSOCIAL

Nonsocial persons enjoy working on their own, on activities where individual effort, knowledge and self-reference predominate. They have a preference for activities dealing with inanimate objects such as machines, processes, techniques and data (numerical and spatial qualities of things).

The following are examples of occupations which are considered to be nonsocial:

statistical technician
computer operator
cabinet maker
library clerk
machinist
diesel mechanic
heavy equipment operator
tree surgeon

9. VERSATILE

Versatile persons enjoy situations which involve change, which permit attention to be shifted from one thing to another, rather than focused on the same thing for long periods, and which provide opportunity for encountering the new and unexpected. They are able to keep track of a number of different things, adjust to changes in pace of activities, and can move with ease from one task or frame of mind to another quite different one. They usually like to be where several things are going on at once, and can cope with continually changing, often conflicting circumstances.

The following are examples of occupations which are considered to be versatile:

lawyer
community organization worker
hospital administrator
administrative assistant
editor
advertising manager
investment analyst
contractor

THANK YOU FOR COMPLETING THE QUIZ.

YOU CAN KEEP THIS BOOKLET FOR YOUR OWN USE.

EVALUATION AND CAREER EDUCATION*

Fred C. Rankine,
Carolyn Layden-Stevenson, University of New Brunswick

There is a growing concern about the articulation between school and the work place. The Canadian Education Association Advisory Committee on Communication Services is now in the process of compiling the needed information for a document that will be presented to the membership later this Fall. While this type of activity will give us a reading on the current status of this articulation, there are many activities that will probably go unmentioned because of the emphasis on secondary school and employment. Many of the early efforts at this articulation occur in the school setting at the elementary level. There is a growing body of commercial career education kits that are currently available and that receive wide distribution within the schools.

Because of the variety of materials available, there are many logistical problems that confront teachers when they are asked to make some sort of choice for their students. This paper is an attempt to demonstrate how the methodology of program evaluation was modified to assist in the preparation and creation of an instrument that could be used for evaluation of existing career kits. The paper will start with a discussion of the model, followed by its application. Finally, the rating of the career education kits will be examined.

Some years ago, a group of evaluators began their report on educational evaluation with a statement that the purpose of evaluation is not to prove but to improve. In many jurisdictions the new wave of evaluation activity is misunderstood and misinterpreted. Evaluation is a threat when data are arbitrarily used to identify poor performance, when people are influenced negatively without any opportunity to improve their own situation, and when the items or persons that are being evaluated are not involved in the process of establishing meaningful objectives, or in the process of gathering and reporting on data.

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* An assessment instrument based upon D.Stufflebeam's CIPP Evaluation model was developed to assist career educators in their task of evaluating the many commercial (K-6) programs available. From a review of the literature, twelve descriptive and eighteen judgemental criteria were identified. Summation of categories produced a global score permitting comparisons from program to program. A reliability estimate of .97 was obtained.

While it would be very convenient if there was a uniform procedure for each case, unfortunately no two situations are the same. A theoretical model will, however, provide a rather loose framework which helps one to avoid accidentally eliminating some crucial factor. One approach that is systematic and useful is based upon the work of D.L. Stufflebeam at Western Michigan University, Kalamazoo, Michigan.

For decades educators have set educational objectives and then measured performance against their objectives. This approach typifies the Tylerian approach to education. In 1956 and later, B. Bloom and his colleagues set out to develop the taxonomies of Educational Objectives--Cognitive, Affective and Psychomotor Domain. This involved a rethinking of measurement procedures that is highly useful today. By 1963, Cronbach (1963) was writing about course improvement through evaluation which perhaps can be seen as a period of transition--a search for a new approach.

In 1965, the U.S. Congress passed the ESEA which made Federal money available for countless numbers of educational projects, programs and innovations throughout the U.S. But at that time a condition of accountability was included which required an evaluation report. The first round of evaluation reports received came in different shapes, sizes, and often competing theoretical models which caused the legislators much concern. In an attempt to provide some standardization to these reports, proposals for evaluation models were requested from interested parties. Four early models that emerged included the theoretical writings of Stake (1967), Scriven (1967), Provus (1971), and Stufflebeam (1971). Many evaluation practitioners today subscribe to one of these orientations, yet all are concerned with the improvement of what is being evaluated. The Stufflebeam (1971) CIPP model provides a management-oriented--some would say common sense-approach to evaluation.

In the CIPP model, educational evaluation is defined as the process of delineating, obtaining, and applying useful information for judging decision alternatives. The categories proposed in the theoretical model are mutually exclusive and are somewhat similar to what one would encounter in the more common operations management system.

Eight specific questions must be dealt with in any evaluation. Those questions are:

(1) What is it?
(2) What is it for?
(3) What variables does it consider?
(4) What information does it require?
(5) Whom should it serve?
(6) Who should do it?
(7) How should it be done?
(8) By what standards should it be judged?

Program evaluation is conducted for several valid reasons. In situations where a "new" curriculum is proposed, there must be decisions made that will contribute to decisions about program installation. Need, program conception, estimated cost, operational feasibility and projected demand and support are the critical categories that must be examined.

A second purpose would be to make decisions about program use, continuation, or expansion. The continuing needs and the global effectiveness in meeting these needs in both the short and the long term are important elements. In addition, you must ensure that negative and positive side effects that result from the program are evaluated. Cost in relation to viable alternative programs and in relation to effectiveness must be considered along with the demand and support that surrounds the program.

Programs are also evaluated in order to expand our understanding of the basic processes-educational, psychological, physiological, social, economic, and evaluation methodology.

The most useful purpose of program evaluation for the classroom teacher is probably the need to contribute to decisions about program selection and/or modification. The descriptive categories of the CIPP model alone will be of assistance. First and foremost, one must examine the program objectives and assess the validity and utility achieved by your efforts. We must also assess objectives through acceptance of our objectives on the part of staff, client (if one exists), other professionals, and popular acceptance.

Program content is also critical. Here we may consider several sub-needs which are sources of information that will assist us in making sound judgements. Is the content relevant to the program objective, and is there proper coverage? Can we assess technical accuracy, degree of structure, and the relevance to the background of our client? At this point we must determine both the effectiveness and sequence of components. Lastly, are the acceptance indicators through the area of popular, professional, client and staff?

To evaluate the commercial career education kits available, the Context portion of the Stufflebeam CIPP evaluation model was used. Context evaluation defines the relevant available material, identifies unmet needs and unused opportunities, and diagnoses the problems that prevent needs from being met (Stufflebeam, 1975). At a workshop held in 1975, an attempt was made to delimit the categories of information that might be examined while involved in a context evaluation. The major variables that must be examined include target audience, needs, opportunities, problems, and objectives. Based upon this form of a model, the evaluation instrument to examine the commercial kits was prepared. It was determined that the criteria could be classified under two major categories: descriptive and judgemental.

The instrument was devised and consisted of two pages: the first page contained the descriptive criteria which would not require validation, while the second page was devoted to the judgemental (see Appendix A). The judgemental portion of the instrument was subjected to validation by other individuals.

Criteria, particularly judgemental, were developed from the literature (Borman and Stenning, 1973; Weinrach, 1974), and from statements made by career educators. The judgemental portion consisted of a list of specific criteria with numerical values attached, ranging from 1 = very poor, to 5 = very good. The ratings were the same for all criteria with the exception of "Bias" which ranged from 1 = a great deal, to 5 = none.

Prior to the final revision of the evaluation instrument, a career education program was evaluated on a trial basis. In this situation, the instrument seemed to work well. It was, however, decided to attach weighted scores of 0 - 2 to the criteria entitled "Reference Bibliography" and 1-3 for the criteria of "Supplementary Materials." It was felt that practitioners are more concerned with the application of ideas than discussions about theory. Teachers often report that they do not feel they have the time to review the literature available. Hence, a more accurate evaluation, in terms of usage, would attach less significance to a reference bibliography than to supplementary materials.

Permission was received from the Director and Consultant of Pupil Personnel Services, Department of Education, Province of New Brunswick, to carry out this study. Arrangements were made to use facilities provided by the Department of Education. There were forty-three career education programs and/or kits, pertaining to the elementary level, within the Department of Education. The programs were studied, applying the devised evaluation instrument.

In an effort to establish the reliability of the evaluation, it was decided to have some of the materials, or portions of them, examined by other persons. It was agreed that the people chosen to validate the data should be qualified in the area of elementary guidance and possess some knowledge of career education for that level. Six persons within the province's anglophone schools met these requirements.

All validators carried the responsibilities of full-time positions, and it was noted that during the months of May and June, end-of-the-term activities and paperwork often result in increased pressures. Validators were contacted by telephone, the purpose of the call was explained, and an appointment was arranged. Subsequently, a form confirmation of appointment letter was devised and mailed.

Since six people were available to evaluate the materials, six programs were chosen for viewing. Each person was asked to inspect three programs. Hence, each of six programs was subjected to a total of four evaluations, including the writer's . In choosing the six programs, it was elected to select two programs which had been awarded high ratings, two that received more average ratings, and two that received poorer ratings. Finally, in each of these categories, one program applied to the primary level and one applied to the intermediate level.

Programs were delivered to the individuals concerned along with the appropriate evaluation instruments. Each of the evaluative criteria was reviewed to ensure the validator's perception of the criteria was congruent with that of the writer. The validator then examined and evaluated the materials. Upon completion, the materials and evaluations were collected.

An estimate of reliability was obtained using an analysis of variance technique outlined in Winer (1962). The estimate of reliability of the average of the four ratings made on each of the programs was $r_4 = 0.97$. The estimate of reliability for a single rating was $r_1 = 0.92$. These values indicate that the evaluation instrument can be applied to commercial career education programs and provide reliable ratings, and that the evaluations of the writer provide an accurate reflection of the evaluations of other persons qualified to make judgements about career education programs.

Numerical values for criteria were totalled and a global score was obtained for each program. In an effort to provide a concise and comprehensive report of the global scores obtained, programs were arranged in alphabetical sequence and criteria were collapsed and categorized under four variables. The numerical values for each criteria were summed.

The first variable "Student Appeal" included the criteria "Appeal for Student," and "Appeal of Activities to Student." This variable had a total possible score of 10. The second variable "Program Appropriateness" included "Realism," "Bias," "Appropriateness to Grade Level," "Appropriateness of Guide Material," and "Appropriateness of Activities," with a total possible score of 25. The third variable "Program Versatility" included "Flexibility of the Program," and "Potential for Integration to Other Curriculum Areas," and had a total possible score of 10. Finally, the fourth variable was entitled "Organization" and included "General Organization," "Clarity of Guide Material," "Organization of Activities," "Supplementary Materials," and "Reference Bibliography." "Organization" had a total possible score of 30.

Since various individuals or institutions might be interested in purchasing one or more programs, cost was included as a fifth variable.

Programs were arranged alphabetically and possible total scores and actual scores for each variable and global scores for each program were provided. Individual program evaluations were provided, in booklet form, to the Department of Education which provided copies to elementary schools throughout the province. The summary table of ratings for the forty-three programs is included as Appendix B.

Based upon an analysis of the paper, the following conclusions were drawn:

(1) The Department of Education has a wide range and variety of commercial career education kits/programs, K - 6 available to the schools within the province.

(2) Educators seeking career education materials can obtain a large variety of such materials from the Department of Education and at the present time, it does not appear necessary to search beyond the Department of Education for suitable career education materials.

(3) Career Education kits/programs, K - 6, available from the Department of Education require no special training prior to use, and therefore can be readily implemented by educators within a classroom situation.

(4) The evaluation of the career education progams K - 6 provides a comprehensive report of each program and allows for possible pre-selection of programs.

REFERENCES

Borman, C. and Stenning, W.F. A Report of Career Education Material Effectiveness as Judged by Teachers. Texas: Centre for Career Development and Occupational Preparation, 1973.

Cronbach, L.J. Course improvement through evaluation. Teachers College Record, 1963, 64, 672-683.

Provus, M.M. Discrepancy Evaluation. Berkeley, Calif.: McCutchan, 1971.

Scriven, M.S. The methodology of evaluation. In R.E. Stake (Ed.), Curriculum evaluation. AERA Monograph Series on Evaluation. Chicago: Rand McNally, 1967, 1.

Stake, R.E. The countenance of educational evaluation. Teachers College Record, 1967, 68, 523-540.

Stufflebeam, D.L. Educational Evaluation. Draft of an unpublished chapter for an occupational education book. Revised CIPP, fugitive paper.

Stufflebeam, D.L., Brickell, H.M., Guba, E.G. & Michael, W.D. Design for evaluating R & D institutions and programs. A report presented to the Division of Research and Development Resources, National Center for Educational Research and Development, U.S. Office of Education, August, 1971.

Wienrach, S.G. "How to Evaluate Career Information Materials." The School Counselor, 1974, 22, 53-57.

Winer, B.J. Statistical Principles in Experimental Design. New York: McGraw-Hill, 1962.

APPENDIX A

TITLE:

PUBLISHER:

LEVEL:

CONTENTS:

COST:

DESCRIPTION:

THEORETICAL ORIENTATION:
Holland ______________
Hoppock ______________
Ginzberg ______________
O'Hara ______________
Roe ______________
Super ______________
Tiedeman ______________

INSTRUCTION:

Group ______ Individual ______________
Programmed ______ Teacher ______________

SPECIAL TRAINING REQUIRED: Yes ______ No ______

PREPARATION TIME REQUIRED: ____________________________

PRESENTATION TIME REQUIRED: ____________________________

ACTIVITY TIME REQUIRED: ____________________________

APPENDIX A (continued)

	Very Poor 1	Poor 2	Average 3	Good 4	Very Good 5
GENERAL ORGANIZATION	____	____	____	____	____
APPEAL FOR STUDENT	____	____	____	____	____
REALISM (are presentations, i.e., experiences, situations, conflicts, etc. typical for children of this age?)	____	____	____	____	____
BIAS (racist, sexist, religious, ethnic)	____	____	____	____	____
	A great deal				None
CLARITY OF OBJECTIVES	____	____	____	____	____
APPROPRIATENESS TO GRADE LEVEL	____	____	____	____	____
ORGANIZATION OF GUIDE MATERIAL	____	____	____	____	____
CLARITY OF GUIDE MATERIAL	____	____	____	____	____
APPROPRIATENESS OF GUIDE MATERIAL	____	____	____	____	____
ORGANIZATION OF ACTIVITIES	____	____	____	____	____
APPROPRIATENESS OF ACTIVITIES	____	____	____	____	____
APPEAL OF ACTIVITIES TO STUDENT	____	____	____	____	____
FLEXIBILITY OF PROGRAM (potential for being readily adapted to specific groups of children and different teaching styles)	____	____	____	____	____
POTENTIAL FOR INTEGRATION TO OTHER CURRICULUM AREAS	____	____	____	____	____
	Poor 1		Average 2	Good 3	
SUPPLEMENTARY MATERIALS (contained and/or listed)	____		____	____	
	Poor 0		Average 1	Good 2	
REFERENCE BIBLIOGRAPHY	____		____	____	

APPENDIX B

Table of program comparisons on the 43 career education kits/programs, K - 6

SA = Student Appeal
PA = Program Appropriateness
PV = Program Versatility
PO = Program Organization
GS = Global Score

	SA	PA	PV	PO	Cost	GS
Total Possible Score	10	25	10	30	n/a	75
A World Of Our Own	5	16	4	16	$ 80.00	41
Bread and Butterflies	10	25	10	26	$3000.00	71
Career Development for Primary Grades	6	16	4	18	$ 79.00	44
Career Survival Skills	5	19	9	27	$ 77.25	60
Developing Understanding of Self and Others I	10	25	6	28	$ 170.00	69
Developing Understanding of Self and Others II	10	25	6	28	$ 170.00	69
Dimensions of Personality A. Now I'm Ready	6	18	4	16	$ 99.20	44
Dimensions of Personality B. I Can Do It	6	18	4	16	$ 99.20	44
Dimensions of Personality C. What About Me	6	18	4	16	$ 99.20	44
Dimensions of Personality Here I Am	6	17	4	16	$ 121.45	43
Dimensions of Personality I'm Not Alone	6	17	4	16	$ 159.10	43
Dimensions of Personality Becoming Myself	6	17	4	16	$ 174.65	43
Explore Unit One: A Career Awareness Program	7	17	6	23	$ 109.45	53

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APPENDIX B (continued)

Table of program comparisons on the 43 career education kits/programs, K - 6

SA = Student Appeal
PA = Program Appropriateness
PV = Program Versatility
PO = Program Organization
GS = Global Score

	SA	PA	PV	PO	Cost	GS
Total Possible Score	10	25	10	30	n/a	75
First Things: Values A. The Trouble With Truth	9	20	5	20	$ 26.00	54
First Things: Values B. What Do You Do About Rules?	8	17	5	20	$ 26.00	50
First Things: Values C. That's No Fair	9	21	5	20	$ 26.00	55
First Things: Values D. You Promised	9	20	5	20	$ 26.00	54
First Things: Values E. But It Isn't Yours	8	21	5	20	$ 26.00	54
First Things: Social Development A. How Do You Know What Others Will Do?	7	19	5	21	$ 26.00	52
First Things: Social Development B. How Do You Know What's Fair?	9	22	5	20	$ 26.00	56
First Things: Social Development C. How Would You Feel?	9	21	5	21	$ 26.00	56
First Things: Social Development D. How Can You Work Things Out?	9	22	5	20	$ 26.00	56
Focus on Self-Development (Stage One - Awareness)	10	24	9	27	$ 169.50	70

APPENDIX B (continued)

Table of program comparisons on the 43 career education kits/programs, K - 6

SA = Student Appeal
PV = Program Versatility
GS = Global Score
PA = Program Appropriateness
PO = Program Organization

	SA	PA	PV	PO	Cost	GS
Total Possible Score	10	25	10	30	n/a	75
Focus on Self-Development (Stage Two - Responding)	10	25	9	27	$ 189.50	71
Focus on Self-Development (Stage Three/Involvement)	9	23	9	27	$ 189.50	68
Frustration - How Can I Get It Right?	8	19	4	13	$ 100.00	44
Let's Begin	6	17	4	14	$ 64.50	41
Lollipop Dragon Adventures in Self-Awareness "The Me I Can Be"	10	25	7	23	$ 120.00	65
The Lollipop World of Work Learning Module	10	25	10	26	$ 170.00	71
Many People, Many Careers	7	20	5	19	$ 79.00	51
My Friends and Me	10	24	7	24	$ 250.00	65
People of the Forest - A Study in Human Values	10	24	9	26	$ 175.00	69
Project Me - How Are You Feeling Today?	8	17	5	20	$ 134.50	50
Project Me - If You Do Something	8	17	5	20	$ 134.50	50
Say It With Puppets	6	16	4	13	$ 20.85	39

APPENDIX B (continued)

Table of program comparisons on the
43 career education kits/programs, K - 6

SA = Student Appeal
PV = Program Versatility
GS = Global Score
PA = Program Appropriateness
PO = Program Organization

	SA	PA	PV	PO	Cost	GS
Total Possible Score	10	25	10	30	n/a	75
Sesame Street Skills for Growing A. Learning to Use Your Mind	10	23	8	21	$ 64.50	62
Sesame Street Skills for Growing B. Learning to Solve Problems	10	23	8	21	$ 64.50	62
Sesame Street Skills for Growing C. Learning About Yourself	9	23	6	21	$ 64.50	59
Sesame Street Skills for Growing D. Learning About Others	10	23	8	21	$ 64.50	62
Someone Special...Me	6	15	5	18	$ 95.00	44
Time Together	7	23	4	15	$ 180.00	49
Towards Affective Development	10	25	8	26	$ 190.00	69
What Should I Do?	7	19	5	22	$ 84.00	53

MANITOBA'S CAREERS SYMPOSIUM: A MODEL

Tom Prins, Consultant, Manitoba Department of Education
Elizabeth Speers, Youth Consultant, Manitoba Region

BACKGROUND

The Careers Symposium was conceived in 1980 by the School Counsellors' Association of Manitoba (SCAM) as a means of helping Grades IX - XII students make career related decisions. The first Symposium was a relatively modest effort, held at the University of Winnipeg and attended by 4,500 students over a two day period. After that initial success, a rapid growth process took place. Careers Symposium '82 was held at the Winnipeg Convention Centre, and drew an attendance of 24,000 students and parents. The event had now been expanded to include two days and one evening, with the evening program especially designed for parents and other interested adults. The recently held Careers Symposium '83 was the biggest yet. The Symposium this year probably constituted the largest career event in Canada, 110 booths, 60 speakers and 25,000 students and adults congregated in the Winnipeg Convention Centre, February 7 and 8. The line-up of attractions included everything from the usual "career day" roll-call of doctors, lawyers and accountants to the high technology occupations. But the Careers Symposium, as conceived and executed by the School Counsellors' Association of Manitoba, was career shopping with a difference. Business and industry were expected to put their occupations on display for the students. For example, the Manitoba Masonry Institute built a brick wall, giving everyone who visited a chance to lay a brick or two. Meanwhile the relatively small Manitoba Tool and Machine Association was machining aluminium, which did more than any lecture or text to graphically depict what machinists and tool and die makers do all day. The Manitoba Hotel Association managed to turn their gigantic booth into a model hotel, complete with computerized registration desk, kitchen, bar, bedroom and dining room. These examples are representive of what the Symposium tries to portray, actual workers doing their jobs with the most up-to-date equipment available.

PURPOSE

Manitoba's Careers Symposium was developed with a number of specific purposes in mind such as:

1. To stimulate interest in educational and career planning.
2. To assist students to understand the process of career planning, i.e., to help students discover where they are at present in this ongoing process.

The symposium is but one dimension of the total spectrum of career planning experiences that students will have in their career development.

3. To provide students with exposure to career and educational alternatives. Emphasis is placed on non-traditional careers for men and women and careers in critically short supply.
4. To provide an opportunity for parents and other adults to explore the world of work in a convenient setting during a time set aside especially for them.

FUNDING

A mammoth undertaking such as the Careers Symposium would not be possible without strong public and private sector support, and the job of the Chairperson of the Symposium Steering Committee (the Committee that oversees the implementation of the Symposium) has been to muster the necessary resources. At the present time the well-over $100,000 price tag has been met in part by three provincial government departments, (Education, Labour and Employment Services and Economic Development and Tourism), the Canada Employment and Immigration Commission, the Winnipeg Foundation, The Manitoba Teachers' Society and, of course, the School Counsellors' Association of Manitoba. This does not include the vast sums exhibitors are donating in the form of many hours of their time given to the Symposium, the thousands of dollars worth of machines they bring to demonstrate their trade i.e., robotic welders, semi-trailer tractors etc., plus the wealth of pamphlets, brochures, posters, bags, buttons, calendars, etc., that are handed out over the two days. No one involved in the Symposium has attempted to tally the voluntary support it receives, but it is as diverse as volunteer security from the Manitoba Militia to banner design by a local graphics company. Even school students are involved in a volunteer capacity organizing the hospitality room for presenters, while SCAM members introduce the myriad of speakers. The Symposium represents an amalgamation of many resources in a venture that shows no immediate profitable return, but represents an investment in the future of thousands of students and the survival of industry.

PLANNING

The implementation of the Careers Symposium is overseen by a small steering committee of eight people. All are SCAM members, but do not necessarily work within the school system. The success of the Steering Committee has been their divergent strengths, and the fact that each one of them is a "mover and shaker" in their own right. In order to mount a Symposium of this size you need energetic people who can make things happen. The Symposium has reached the level of financial support where it can afford to hire a full-time employee for the six months preceding the actual event. In addition, the Symposim uses PERT (program evaluation and review technique) and CPM (critical path method) as a planning and control technique to ensure that project planning is completed in the shortest period of time with minimum expenditures.

COMMITTEES

Committees are important, but should be limited to the essentials and comprise only the number of people necessary to get the job accomplished. In some instances, for example, a "committee" of one or two is all that is needed at the planning stage. During the event itself, more people can be drawn into the operation of the various responsibilities.

The salaried person is a coordinator, responsible for coordinating the various areas such as presenters, schools, printing of programs and design of the floor plan.

The Steering Committee of 8 people was divided into four committees with the power to add members as needed.

The Security Committee is responsible for ensuring the safety of booths and contents when the Symposium is closed, i.e., during the dinner hour and the night. (A night watchman is hired and the Convention Centre security alerted.)

This committee is also responsible for security while the Symposium is open to students and the public. This is accomplished by enlisting the services of a military police platoon of the Manitoba Militia on a voluntary basis. In addition, walkie-talkies are rented and used by the militia and members of the Steering Committee. In this way any potential problems can be reported immediately and handled before they become an issue.

This Committee is also responsible for vehicle flow (e.g , school buses), for security in the underground parking lot, supervision of stairs, escalators and elevators and the general areas where students tend to congregate.

The Hospitality Committee is responsible for two areas - food and information. This committee determines where, when and what is to be served in the way of food, coffee, etc. For example, coffee and donuts are available for presenters during the afternoon and evening of the day prior to the opening of the Symposium, as the booths are being set up. During the two days of the Symposium, coffee and donuts are available in a VIP Lounge for presenters and guests, manned by students from a local school who are taking a food services course. This work is used by the school as part of the students' training program. A small honorarium is given to the class which they are using to build a scholarship fund.

The committee is also responsible for a wine and cheese party given for presenters during the dinner gap between the day program and the Adult Career Shopping Night.

The responsibility for dispensing information is also given to the hospitality committee. Information booths are strategically placed, complete with programs and maps of the booth area. These information booths, also equipped with walkie-talkies, prove invaluable in helping counsellors and teachers to round up students at bus departure times. Request for groups and missing individuals are announced on the public address system.

The Presenters Committee has the major function of improving the quality of the booths and speaker rosters. They are responsible for searching for new presenters and suggesting improvements to those returning. The emphasis being on present and future occupations within industries, businesses and organizations. A strong emphasis this year was placed on micro-electronics, robots and offices of the future.

In order to assist presenters in their visual presentations the committee organized a workshop with the cooperation of the Manitoba Design Institute, open to all presenters. The workshop, covered how to set up and design a booth and where help could be obtained, if so desired.

The Speakers Committee is responsible for checking the rooms for the 60 speakers, each speaking twice a day for the two days. (This part of the program has not been extended to the evening for adults.) In addition, this committee is responsible for enlisting some 80 members of SCAM to host each of the speakers by way of introductions and thank you's, and to exercise any student control that might be necessary. Speakers are requested to bring their own equipment such as VTR, projector, etc. These are stored by the committee and guarded in an easily accessable room by members of the committee.

The Media/Publicity Committee is, essentially, responsible for advising the parents and general public of the Adult Career Shopping Night held from 7 to 10 p.m., on Day 1 of the Symposium. As the organizing group has not budgeted for publicity, this is done by enlisting the public spirit of the community and the good will of the schools (to advise parents) within Winnipeg and a radius of 80 to 100 miles from Winnipeg.

The response and cooperation of the media and business has been remarkable. For example, one of the radio stations donated 7 tapes for distribution to rival stations, a graphic company produced 4 banners to be placed on CPR overhead bridges and 15 bus signs, the space being donated by the Ad Company for one month prior to the event. Space on 4 bill boards was donated, several radio and television stations, both English and French interviewed members of the Steering Committee for publicity purposes, and many other groups gave assistance.

The committee is responsible for advising the media through backgrounders and press releases on the Symposium in general. A feature article published in the Manitoba

Business magazine was initiated by the Committee. The committee also organizes the media coverage of the official opening of the symposium, to which dignitaries and political leaders are invited and supervises the judging of the booths. During the Wine and Cheese event, three placques are presented by SCAM to the top three booths. This year two representatives from the media and two high school students acted as judges.

STUDENT PREPARATION

If students attending the Symposium are to gain optimum benefit from the experience, they should prepare, in advance a short list of occupations which reflect their interests and aptitudes. To assist them with this exercise, preparation packages are provided to all schools indicating their intention of participating.

The preparation packages consist of a copy of "Moving on to a Career", produced and donated by Canada Employment and Immigration Commission, and a sample of the type of questions a student should ask when researching occupations. It is strongly suggested to the participating schools that the students be taken through the Moving On program as a part of their ongoing career education program during the school year. School Counsellors and teachers are offered a training workshop in the use of Moving On to a Career. Over the past two years more than 300 counsellors and teachers have attended these workshops.

PRESENTER PREPARATION

To ensure that both presenters and students benefit from the Symposium, certain steps have to be taken to prepare presenters. Many presenters have not had the experience of designing a booth and working with Convention Centre facilities, and knowing what kind of questions to anticipate from students. The Manitoba Careers Symposium, therefore, provides a booth design workshop at the Winnipeg Convention Centre, which includes a complete tour of the building. In addition, presenters are given lists of questions which are most commonly asked by students, and are urged to do their homework to ensure that students do not travel hundreds of miles to come to the Symposium only to wind up with vague information. The flow of information to presenters starts about six months before the actual event. This takes place both in the form of personal contacts and mailings. Regular newsletters go out to presenters, keeping them up-to-date on the work that is being done to implement the Symposium. The objective of this exercise is to ensure that the presenters know exactly what is expected, are enthusiastic and feel a part of the event, not only during the Symposium, but throughout the whole planning process. Many presenters become involved in the implementation aspect by providing services to the Symposium such as printing, graphics, design work, advertising, etc. Industry, if given the opportunity, is only too happy to participate. In fact, it was industry that suggested that the Symposium move from its modest quarters at the University of Winnipeg in its' first year to the Convention Centre, and it was industry's involvement that necessitated a doubling space at the Convention Centre in 1983.

PARENTS

Parents are the primary influence on a student's choice of a career. Yet many parents are out of step with today's job market. Even employment counsellors have difficulty keeping pace with the proliferation of careers in the changing market place. How can a parent possibly appreciate that his/her daughter, enrolled in a standard Grade 10 secretarial course and learning such skills as shorthand, will likely be redundant before she graduates? Only confrontation with the facts of the current labour market will ensure that parents are not passing on misinformation to their children. The Career Symposium is open one evening specifically for parents to find out such things as "within five years, all secretarial work will involve some form of word processing". This up-to-the minute display of the needs of the labour market today can exert a profound influence on parents.

The experience of the Career Symposium suggests that business and industry are prepared to provide the assistance necessary.

EVALUATION

In 1981-1982, the Research Branch, Manitoba Department of Education was requested by the Steering Committee to undertake an independent and comprehensive evaluation of the Symposium. The overall conclusion was,[1] "that the stated objectives were met. However, the extent to which each objective was attained varied". The Steering Committee used this evaluation to improve this year's Symposium and was to a great extent successful. However, we can still see areas that need improvement and doubtless will continue to do so each year the Symposium is held. In the meantime, for Manitoba, the Symposium serves as a unique example of cooperation between the public and private sectors in an effort to serve the youth of our Province.

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[1] ..."The 1981-82 Manitoba Schools Careers Symposium: An Evaluation. Research Branch, Department of Education, Manitoba.

THE NEUROLOGICAL BASIS FOR A COGNITIVE APPROACH TO COUNSELLING

Maureen Kennedy Baker, Chairman, Applied Arts Division

The cognitive approach to counselling emphasizes both the importance of, and strategies for, assisting the client to perceive both self and environment differently, especially as these perceptions relate to learning. Cognitive counselling teaches new ways of thinking. This genre of counselling has particular application in educational settings. Recent neurological, neuropharmacological and neuropsychological research is expanding the knowledge base for cognitive counselling. Increased understanding of variability in learning styles enhances the effectiveness of counselling in educational settings, particularly in high schools and community colleges.

> "We should teach children that they are unique marvels who have evolved over millions of years with no identical counterparts." Pablo Casals

INTRODUCTION

Throughout history dualism in human nature has been recognized and analyzed. As early as the 4th century B.C. there existed the archetypal Chinese Yin-Yang symbol which neatly encapsulates the duality. Yin and Yang literally mean "the dark and sunny side of the hill"; in their extended sense, they stand for two complementary principles, as expressed in art, medicine, nutrition, social custom, philosophy, subatomic physics and sexual union.[1]

According to the I Ching or Book of Changes, one pole is in time, the other in space; one is light, one dark; one is the sun, the other the moon; one is active, the other receptive; one is the doer, the other the dreamer; one is male, the other female. Both originated from one primordial breath, Chi, which divided into mountain mist and earth vapour.

Western cultural history recognizes this duality in human nature: senses vs. logic; passion vs. reason. The duality gave birth to Dionysius, god of passion, play and sensory experience; and Apollo, the god of reason, deliberation and logic. For the ancient Greeks, problem solving was available in two styles; a man paid homage and sought the wisdom of the god with whom he could most readily identify or with whom the problem was most compatible.[2]

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[1] From seminar notes: Western Philosopy and the Psychology of the Unconscious under the direction of Maria Profelissa, Jung Institute, Zurich. February, 1977.

The duality was recognized by Roger Bacon who, in 1268, wrote: "There are two modes of knowing, through argument and experience. Argument brings conclusions and compels us to concede them, but does not cause certainty nor remove doubts in order that the mind may remain at rest in truth, unless this is provided by experience." This passage was echoed seven hundred years later in Robert Pirsig's book entitled Zen and the Art of Motorcycle Maintenance (1974). Pirsig wrote: "This is the source of the trouble. Persons tend to think and feel exclusively in one mode or the other and in doing so tend to misunderstand and underestimate what the other mode is all about." Both statements testify to the dualistic nature of human cognition.

Recent research into learning disorders (Myklebust, 1976; Aaron and Malatesha, 1982), hemispheric asymmetry (Kinsbourne, 1978), laterality (Harnad et al, 1977), dominance patterns (Herrmann, 1982) and sex differences in brain growth (Epstein, 1974) and in functional asymmetry (Levy, 1972) seem to be providing scientific support for what has always been known: we are variable creatures - variable in our styles of consciousness (Orstein, 1972), our styles of thinking (Ornstein, 1973), our styles of knowing (Bacon, 1268; Bruner, 1962), our styles of learning (Hunter, 1974; Ostrander and Schroeder, 1979; Orme, 1979), and variable to the extent that sex differences impact on these styles (Waber, 1977; McGlone, 1980; Strauss, 1981; Lipovenko, 1982; Alaton, 1982).

COGNITIVE COUNSELLING

Cognitive counselling, by definition, is an approach to counselling which emphasizes the importance of, and the strategies and techniques for, assisting individuals to recognize their patterns of perception and their learning styles. Such an approach enables counsellors to assist clients to perceive and learn optimally. Those who utilize ways of perceiving and learning which disadvantage them as learners, either generally or in specific learning situations, can be taught new ways of perceiving and thinking; in other words, new cognitive modes. To this end, counselling is a process of instruction and instruction is a counselling process.

Cognitive counselling is client-centered counselling; and, as in any client-centered therapy, to be effective the counsellor must hold "a system of attitudes which is implemented by techniques and methods consistent with it"

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[2] Ibid.

(Rogers, 1951, p. 19). In cognitive counselling these attitudes, of necessity, must be consistent with the belief that individuals have the capacity for, and can learn, new ways of knowing. The techniques and methods which the counsellor must build into his/her repertoire are required to facilitate the assessment of the clients' learning style (Lowman et al, 1982; Herrmann, 1982) and to instruct the client in learning strategies which are consistent with the nature of what is to be learned and, in many cases, with the teaching style being used (Orme, 1979).

The investigation of any human activity (in this instance, cognition) requires an examination of the information available from a variety of disciplines with a view to unifying the observations. What the author has attempted is a kind of ecumenical approach to cognitive functioning, showing how a variety of disciplines can each explain certain influences on cognition; and how an understanding of these influences can, in turn, assist counsellors in educational settings. To these ends, the observations have been unified under the rubric of cognitive counselling.

This paper will highlight findings from selected studies in the areas of neurology, neuropharmacology and neuropsychology with two-fold intent:

i) to support the premise upon which cognitive counselling is built: that it is not only possible, but often necessary, to teach individuals new cognitive strategies.

ii) to expand the knowledge base for counsellors in educational settings, particularly high schools and community colleges.

POTENTIAL FOR "NEW" LEARNING

More often than not, parents, teachers, and counsellors hesitate to "re-teach" their children, students and clients new ways of learning, believing that "We are what we are meant to be"; "He is doing the best he can"; "She'll never be able to do math"; "He'll never be able to spell"; "He can't remember a thing he's learned"; or, "She should stick to something simpler". All such cliches bear testament to the status quo and take support from commonly held beliefs about the limitations of the human brain.

It has been generally accepted that we lose 30% of our neurons during adult life (Brody, 1955) at the rate of one hundred thousand neurons each day (Burns, 1958). These data, though popularized over twenty-five years, have been proven scientifically inaccurate (Kretch et al, 1962; Cummins et al, 1973; Diamond and Connor, in press). The latter investigations, which of necessity were animal studies, illustrate the importance of such variables as diet, social conditions and stimulation on brain structure and growth. Stimulating environments have been shown to contribute to increased cortical thickness, brain weight, dendritic density, myelin thickness and glial count. Each of these changes, in turn, influences the capacity to learn, the rate of learning, memory and problem solving ability. In addition to these general limitations, sex-based limitations have been inherent both in learning theory and in practice for over a century. In 1892, Sir James Crichton-Brown published the results of studies into sex characteristics of brain tissue. He reported that "the anterior region of the brain is more copiously irrigated with blood in men and the posterior region in women". During the nineteenth century, the bloodier regions of men's brains were believed to be the locus of cognitions and ideomotor processes; whereas, those regions in women's brains were "mainly concerned with sensory functions." Crichton-Brown drew these facts to the attention of educators urging them not to "ignore the intellectual distinctions between the sexes".

Although sex differences in the brain and in learning abilities and disabilities have been the subject of speculation and investigation for almost a hundred years, only recently has science provided compelling arguments for the biological bases of many of these learning differences (Levy, 1972; Epstein, 1974; Waber, 1977; Diamond et al, 1980; McGlone, 1980). The fascination, at this juncture, with an age-old observation is that the sex-based differences need not be perceived as limitations and disadvantages, as they have been to date, because the learning environment, the system of education, deemed them so. Rather they can be viewed as specialities.

NEUROLOGICAL BASIS OF LEARNING

In this section, three areas of research are highlighted: the brain's capacity for memory/learning; the stages in brain growth (Epstein, 1974); and the patterning of the neuronal network (Samuels, 1975; Feldenkrais, 1977). The information is summarized with a view to bringing neuroscience to bear in counselling. The interplay will enhance the counselling process; when the counsellor is more informed, the client benefits.

Capacity

Models of information processing and artificial intelligence have provided useful paradigms for gaining insight into human brain capacity and storage. For example, it has been calculated that in the cell body of each neuron up to five billion bits of information can be stored. From here, it can be calculated, using binary language, that the brain's capacity for learning/ memory each year is thus: 14 impressions per second X 10 billion neurons X the number of seconds each year (31,536,000) = 4,415,040,000 billions, or more than 4.4 billion billions of bits of information.

In the brain, there is no true forgetting; impressions are removed from attention, not erased. Since the electrochemical trace is indelible, the human brain, over a human lifetime, has the capacity to store more information than there is information to be stored.

These data from neuroscience and information processing can provide counsellors with a perspective on learning which defies the traditional limitations on the learner. The facts can be used to encourage clients to extend, infinitely, the self-imposed limitations on their capacity to learn and to remember.

Growth

The belief that the brain grows gradually is being dispelled by evidence which shows that the brain grows rhythmically, in stages or spurts (Epstein, 1974). These stages are placed at three to ten months of age, and then from two to four, from six to eight, from ten to twelve or thirteen, from fourteen to sixteen or seventeen years of age (Epstein, 1978). It seems the last four of these spurts occur without increases in the number of brain cells, thus suggesting increases in neural network complexity.

In addition to the age ranges in brain growth, there are sex differences (females are on the early edge of the age spans which characterizes these spurts; and males, on the later edge); and parallels in learning rate (periods of slow brain growth seem to correspond with problems in schooling) (Epstein, 1978; Lipovenko, 1982). The traditional shaping of curriculum forces males to accommodate new concepts in language arts, and females to absorb mathematics and science content, when their brains are least able to handle it.

Brain weight (Epstein, 1978) and DNA data (Kuffler and Nichols, 1976) and measurements of cortical thickness (Rabinowicz, 1979) and synapse density (Huttenlocher, 1979) give substantial support to the fact that the development of function has interdependent features and stages, and hence, implications for learning and curriculum. It seems likely that some learning disorders are simply bad timing.

Patterning

The brain records information in patterns; this patterning is germane to perception and memory. The brain is an autochthonous system.

Perhaps the most dramatic examples of the ability of the brain and nervous system to pattern and re-pattern itself are in recovery from illness. To cite one specific example (Black, 1980), Norman Cousins, the editor of Saturday Review, survived ankylosing spondylitis, a degenerative spinal disease with a recovery rate of one in five hundred, by willing himself to live and by exercises which combined laughter, positive emotions and visualizations of physical regeneration. Cousins literally reprogrammed himself out of illness into health, from disability to ability. This example is replete with implications for counsellors who assist clients with learning blocks, or negative responses to specific subjects or kinds of learning.

Brain exercises and visualization techniques (Samuels and Samuels, 1975) are means of reprogramming the neural network and hence bypassing the limitations of the specific approach to learning to which the client habituated, probably during grade school.

Sex Differences

There is increasing evidence that male and female brains are different neurologically; that is, different in functional organization. The male brain tends to be more highly structured, more asymmetrical in function (Wada et al, 1975); the female brain seems to be less tightly structured, more symmetrically organized, consequently more able to shift between the hemispheres (Maccoby and Jacklin, 1974).

The relation of sexual phenotype to functional brain asymmetry (Levy, 1972; Diamond et al, 1981; Weintraub, 1981), the sex differences in brain growth (Epstein, 1974; 1978) and the effects of sexual maturation at puberty on verbal and spatial skills (Waber, 1976) impinge on neurology and cognition. Because investigation into the sexes and the brain has really just begun, there is yet no complete explanation for the various abilities and the different approaches of males and females to perception, problem-solving, remembering, and communication. Yet, males and females do seem to have different neuro-physiological processes.

Even at this early stage in the research, it seems appropriate that counsellors be cognizant of, and respect, the differences in cognitive mode which are sex-linked. The cognitive approach to counselling would seem to suggest that clients should be encouraged to understand the abilities, preferences and styles which are theirs as a consequence of genes, and then, to expand their repertoire of cognitive strategies.

Commentary

Although the neurology of learning is impressive, "mental events as a class cannot be explained by physical science" (Davidson, 1970, p.100). There is a need for caution lest our approach become reductionist and empirical - in the sense that if learning cannot be observed and measured, it did not happen. Mental events are unobservable, and, being unobservable, are difficult to define.

NEUROPHARMACOLOGY AND LEARNING

In addition to its neurology, brain function is measurably affected by what is eaten. Observations which relate nutrient intake to brain function (Wurtman, 1978; 1982) suggest that one's potential for learning can be enhanced by appropriate modifications in diet and daily metabolic rhythms.

Certain nutrients are the precursors of brain neurotransmitters. Higher levels of such nutrients, particularly choline and the amino acids tryptophan and tyrosine, increase the amplitude of neural signals and the frequecny of synaptic firing. To be more specific: foods rich in lecithin can raise the amount of choline in the blood and, ultimately, acetylcholine in the brain; the latter affects memory, sleep and motor coordination. Tryptophan, is a precursor of the neurotransmitter serotonin which is associated with sleep, pain, depression, irritability and appetite; and tyrosine enhances the formation of dopamine and norepinephrine which, in turn, affect motor co-ordination and perception of reality.

Such a cursory overview is not intended to suggest that the chain of effects is either simple or direct; on the contrary, some of the chemical relationships are awesomely complex; to illustrate, consider that investigators at Sweden's Karolinska Institute have linked a metabolic by-product of serotonin, tagged 5-HIAA, which shows up in spinal fluid, to suicidal tendency.

In addition to the complexities of nutrients and neurotransmitters, there are the complexities of hormones. For example, one naturally occuring hormone, MSH-ACTH 4-10, a by-product of two other hormones, has been shown to affect attention span, visual memory in males and verbal memory in females (Miller, 1983).

Much of the foregoing data implicate one's ability to learn and support the thesis that certain learning disabilities are caused by biochemical imbalances in the brain (Wen[illegible], [illegible]) and the various behaviour problems which impinge on learning have their origins in diet. Several sources claim that food allergy (Mandell, 1973; Feingold, 1975, 1976), hypoglycemia (Wasserstein, 1977), anemia (Wasserstein, 1977) and mineral imbalances (Pfeiffer, 1975) are antecedent to specific learning disabilities which include hyperkinesis, impulsivity, short attention span, depression and memory impairment.

Knowledge of neurochemistry, along with the clinical observations which link nutrition and learning disabilities, make a convincing argument for discussing diet and nutrition with clients who are experiencing difficulty learning; this, with a view to altering diet and/or eating patterns to ameliorate hyperactivity, insomnia, impulsivity and some forms of depression and memory disorders - each of which confounds learning.

NEUROPSYCHOLOGICAL PARADIGMS

Over the past fifteen years the right/left paradigm of cerebral hemisphere specialization has dominated theoretical explanations of brain function. Although the dual theory is scientifically well documented and seems to coincide with a variety of other paradigms - yin/yang, Dionysian/Apollonian, holistic/analytic, illogical/logical, visual/verbal - it is still not sufficient to explain the complexity of human brain function.

Since the early seventies, it has been popular to identify individuals as having a left or right hemispheric cognitive mode according to the relative predominance of characteristics associated with the left or right hemisphere (Bakan, 1971; Ornstein, 1973; Galin and Ornstein, 1972, 1974; Mintzberg, 1976). Although, of itself, this is not harmful, it has the possibility of putting individuals into categories, types or groupings and thus restricting the potential range of their thinking strategies and cognitive modes.

In brief, the cerebral cortex, the convoluted gray matter, is divided into right and left halves or hemispheres. The right nemisphere seems to excel in spatial relationships and visual patterning, perceiving and coding information holistically. The left hemisphere seems "predisposed" (Witelson and Pallie, 1973) to language processing, fine-grained analysis, sequencing and processing information in a linear mode (Bakan, 1971; Kimura 1973; Ornstein, 1973).

This parcellation is neither simple nor consistent; rather, it varies according to sex, handedness, developmental age and early trauma. Although the two half-brains mediate different cognitive functions, they complement each other in some attentional (Kinsbourne, 1974), limited capacity (Kershner et al, 1977; Kershner, 1981) or structural manner (Kimura, 1967; 1973).

One application of the left/right paradigm has been with poor readers who, it seems, apply right hemisphere strategies to a left hemisphere task (Kershner, 1977). In other words, poor readers seem to depend more on holistic, contextbound coding strategies when reading, instead of on analysis.

Studies of the visual half-field effect (Pirozzolo and Rayner, 1979) and right ear-left hemisphere effect (Bakker, 1980) suggest anomalous cerebral organization in those who experience specific learning disabilities. The dozens of studies in this area have resulted in a wide variety of findings; consequently, no clear understanding of the neuropsychological deficit has yet been determined. Nonetheless, to assist learners who seek counselling because of reading disability, or dyslexia, counsellors must be conversant with the range of theories which could explain the disability and of strategies which could circumvent, correct or compensate for the disability.

This right/left paradigm is constantly undergoing refinement; recently it was reported that the differentiation in processing between the hemispheres was one of high- vs. low-frequency information (Sergent, 1983).

Despite variability in the cortical organization of functions, individuals do seem to have a dominant hemisphere, a predisposition or preferred locus of cognitive activity, though not as simplistically determined as previously believed. To appreciate the complexity, we need only consider one additional model of functional specialization - the triune brain model (McLean, 1978) which postulates three distinct evolutionary patterns in the brain, each radically different in structure and chemistry.

In evolutionary terms, the oldest brain is the reptilian brain, the centre of compulsive, repetitious, ritualistic, imitative activity; fixed behaviours and rigid patterns. This brain is instrumental in learning which requires rote memory and patterning. It is hypothesized that individuals who have a dominant 'R-complex' excel at maintenance activities and budgets.

The old mammalian brain, the limbic system surrounds the brain stem and is common to all mammal brains. It is the centre of emotion (love of the young, fear, sharing), tonality and stimulus-response behaviour. The learning style of this brain component is hands-on, sensory experience and the question-answer mode. Individuals who are reported to be 'mammal' dominant enjoy working with people, sharing, dialoguing, facilitating and arriving at decisions in a consensual manner.

The third brain, the neo-cortex or new brain, is the centre of cognition, language communication and transcendence. People who are dominated by the neocortex are presumed to be visionary, independent, intuitive individuals.

Although the three brains each operate somewhat independently, they are extensively interconnected; thus making the whole more than the sum of its parts. As with the dual brain model of cerebral function, the triune brain model needs to be understood by counsellors with a review to understand the nature of human intelligence, preferences in learning styles and career choices.

Inasmuch as there are dominance patterns in the dual brain model and dominance patterns in the triune brain model, there are dominance patterns which result from the interconnectedness of these two models (Hermann 1979, 1982). Despite the utility of these paradigms, there is a problem with the notion of two brains or three brains: it runs headlong into the belief in the unity of individuals.

Proponents of brain exercises (Samuels, 1975; Feldendkrais, 1977; Mildon, 1983) and of structuring the learning environment so as to optimize learning (Coxhead, 1972; Ostrander & Schroeder, 1979) are utilizing the fundamentals of what is becoming known as brain-based learning theory (Hart, 1982). The fact that so many educational institutions consider that learning 50% of what is possible in a particular subject or skill is acceptable, a "pass", might suggest the current understanding of both learning and teaching is in default. Since the expectation of return is marginal, possibly the investment in teaching-learning know-how has just begun.

It has been speculated that the specialization of the hemispheres of the brain into two minds, two ways of knowing, is the result of acculturation (Samples, 1976) with language being the dominant cultural influence, the force of linearity, order and logic. Because Western culture "nurtures an obsession with logic" (Samples, 1976), there is a need to be deliberate about gaining equilibrium between the rational and "right" hemisphere.

In 1972, Ornstein (1972) purported that people could train the right hemisphere in order to build up the intuitive side of themselves by viewing geometric forms. Since then, other strategies have been devised: visualization techniques (Samuels, 1975), drawing with the left hand (Edwards, 1979) and brain exercises (Mildon, 1983).

IMPLICATIONS FOR COUNSELLING

Recent information about how the brain works cannot simply be added to the old familiar educational theories and practices, but rather brainbased learning theory must replace much of what has hitherto shaped educational tradition, teaching methods and curriculum.

The science of learning, with its component fields - neurology, neuropharmacology and neuropsychology, has implications for high school and college counsellors whose objective is to assist students. The student clients who experience difficulty learning, do so, in a system shaped by educational traditions, teaching methods and curriculum which date from the time when the brain was a complete mystery and the mind more incomprehensible still.

Increased knowledge about how people develop, both neurologically and functionally; how people think, remember and learn; and about the various influences which impact upon development and learning will make counsellors more informed about every client. For example, it is not difficult to appreciate the increased utility of standardized assessments of aptitudes, interests, and personality traits if the scores and profiles are interpreted with neurological referents. The expanded knowledge base will better enable counsellors to assist clients in selecting appropriate educational activities, in understanding and coping with incompatible teacher-learner styles and in developing learning objectives and career goals.

The cognitive approach to counselling stresses learning - learning to think, learning to work, learning to be realistic, learning to understand how others think and to be tolerant of differences in thinking and learning styles. The effectiveness of this approach is dependent upon the individual counsellor's knowledge of human learning: its psychology, its neurology, and its chemistry.

REFERENCES

Alaton, Salem. The science of sex. Globe and Mail, November 13, 1982.

Bacon, Roger. Essays. 1268.

Bakan, Paul. The eyes have it. Psychology Today, April 1971, pp. 64-67; 96.

Bakker, D.J. Cerebral lateralization and reading proficiency. In Y. Lebrun and O. Zangwill (Eds.) Lateralization of Language in the Child. Lisse: Swets and Zeitlinger, 1980.

Beveridge, W.I.B. The Art of Scientific Investigation. New York: Vintage Books, 1957.

Bogen, Joseph. The other side of the brain: An appositional mind. Bulletin of the Los Angeles Neurological Societies, 1969, [illegible], 135-162.

Black, David. Medicine and the mind. Playboy, March 1980, pp.. 120-122; 211-221.

Brody, H. Organization of the cerebral cortex III. A study of aging in the human cerebral cortex. Journal of Comparative Neurology. 1955, 102, 511-556.

Bruner, Jerome. On Knowing: Essays for the Left Hand. Cambridge, Mass.: Harvard University Press, 1962.

Burns, B.D. The Mammalian Cerebral Cortex. London: Edward Arnold, 1958.

Crichton-Brown, James. British Medical Journal. May 1892.

Claycomb, Mary. Brain Research and Learning, INFOPAC No. 14. Washington: National Education Association. August 1978.

Coxhead, Nona. Mindpower. New York: Penguin Books, 1972.

Cummins, R.A., Walsh, R.N., Budtz-Olsen, O.E., Konstantinos, T. and Horsfall, F.R. Environmentally induced changes in the brains of elderly rats. Nature, 1973, 516, 518.

Davidson, D. Mental events. In Foster and Swanson (Eds.) Experience and Theory. University of Massachusetts Press, 1970.

Diamond, Marian and Connor, James R. Jr. A search for the potential of the aging brain. American Association for Aging, in press.

Diamond, Marian, Dowling, G.A., and Johnson, R.E. Morphologic cerebral cortical asymmetry in male and female rats. Experimental Neurology, 1981, 71 (2), 261-268.

Edwards, Betty. Drawing on the Right Side of the Brain. Toronto: Macmillan Publishing Co., 1979.

Epstein, H.T. and Epstein, E.B. The relationship between brain weight and head circumference from birth to age 18 years. American Journal of Physical Anthropology, 1978, 48, 471-474.

Epstein, Herman. Commentary/Brainerd: cognitive stages. The Behavioural and Brain Sciences, 1978, 2, 185.

Epstein, Herman. Phrenoblysis: Brain and mind growth periods. Developmental Psychology, 1974 7, 207-16; 217-24.

Fairweather, H. Sex differences in cognition. Cognition, 1976, 231-267.

Feingold, B.F. Hyperkinesis and learning disabilities linked to the ingestion of artificial food flavours and colours. Journal of Learning Disabilities, 1976, 9 (9), 551-559.

Feingold, B.F. Why Your Child is Hyperactive. New York: Random House, 1975.

Feldenkrais, Moshe. Awareness through Movement. New York: Harper and Rowe, 1977.

Galin, D. and Ornstein, R. Individual differences in cognitive style. Neuropsychologia, 1974, 12, 367-376.

Galin, D. and Ornstein, R. Lateral specialization of cognitive mode: An EEG study. Psychophysiology, 1972, 9, 412-418.

Harnad, S.R., Doty, R.W., Goldstein, L., Jaynes J., and Knauthamer, G. (Eds.) Lateralization in the Nervous System. New York: Academic Press, 1977.

Hart, Leslie. Human Brain and Human Learning. New York: Longman Inc., 1982.

Herrmann, Ned. The creative brain II. Training and Development Journal, December 1982, pp. 74-88.

Holland, John. Making Vocational Choices: A Theory of Careers. Enlewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

Hunter, Madeline. Right-brained kids in left-brained schools. Today's Educations, 65 (4), 45-48.

Huttenlocher, P.R. Synaptic density in human frontal cortex: Developmental changes and effects on aging. Brain Research, 1979, 163, 195-205.

I Ching or Book of Changes, Richard Wilhelm Translation in English by Cary F. Baynes. Bollinger Series XIX. Princeton: Princeton University Press, 1977.

Kershner J.R. Cerebral dominance and education: support for a limited capacity, information processing interpretation. Paper presented at The Third International Conference in Neuroscience and Education. Columbia University, New York. April 1981.

Kershner, J., Thomae, R. and Calloway, R. Nonverbal fixation control in young children induces a left-field advantage in digit recall. Neuropsychologia, 1977, 15 (4-5) 569-76.

Kershner, J.R. Cerebral dominance in disabled readers, good readers and gifted children: Search for a valid model. Child Development, 1977, 48 (1), 61-67.

Kimura, Doreen. The asymmetry of the human brain. Scientific American, March 1973, pp. 70-77.

Kimura, Doreen. Functional asymmetry of the brain during dichotic listening. Cortex, 1967, 3, 163-178.

Kinsbourne, M. Mechanism of hemispheric interaction in man. In M. Kinsbourne and W.Smith (Eds.), Hemispheric Disconnections and Cerebral Functions. Springfield, Illinois: Charles Thomas, 1974.

Kinsbourne, Marcel (Ed.) Asymmetrical Function of the Brain. London: Cambridge University Press, 1978.

Kretch, D., Rosenzweig, M.R. and Bennett, E.L. Relations between brain chemistry and problem solving, among rats raised in enriched and impoverished environments. *Journal of Comparative and Physiological Psychology*, 1962, *55*, 801-807.

Kuffler, J. and Nichols, H. *From Neuron to Brain.* Sunderland Mass.: Sinauer Associates, 1976.

Landsmann, L. The brain's division of labour. *New York Times*, April 30, 1978.

Leading Edge Bulletin, January 31, 1982. Levy, J. Lateral specialization in the human brain: behavioural manifestations and possible evolutionary basis. *The Biology of Behaviour.* Corvallis, Oregon: *Oregon University Press, 1972.*

Lipovenko, Dorothy. Why Joanie can't add. *Globe and Mail*, July 1, 1982.

Lowman, Rodney L., Parker, Donald F., and Dodge, L. Delf. Teaching individual differences. Exchange : *The Organizational Behavior Teaching Journal*, 1982, *7* *(1)*, *43-46*.

Maccoby, E.E., and Jacklin, C.N. *The Psychology of Sex Differences.* Stanford, California: *Stanford University Press, 1974.*

Malatesha, R. and Aaron, P. (Eds.) *Reading Disorders: Varieties and Treatments.* Toronto: Academic Press, 1982.

Mandell, M. An introduction to clinical ecology: Allergic, ecologic and addictive factors in physical and mental disease. Presented to the *International Academy of Metabiology,* March 1973.

McGlone, J. Sex differences in human brain asymmetry: A critical survey. *The Behavioural and Brain Sciences*, 1980, *3*, 215-263.

McLean, Paul D. A mind of three minds: Educating the triune brain. In *Education and the Brain.* Seventy-Seventh Yearbook, *Part II, National Society for the Study of Education.* M.C.Wittrock (Ed.). Chicago: University of Chicago Press, 1978.

Masunaga, Shizuto and Ohashi, Walaru. *Zen Shiatsu: How to Harmonize Yin and Yang for Better Health.* Tokyo: Japan *Publications Inc., 1977.*

Mildon, Anne. Exercise aids brain. Globe and Mail, 1983.

Miller, Lyle. Behavioural Sciences Department, Boston University School of Medicine, 85 East Newton St., Boston 02118. 1983.

Mintzberg, Henry. Planning on the left side and managing on the right. Harvard Business Review, 1976, 54 (4), 49-58.

Myklebust, H. Progress in Learning Disabilities, (Vol. 3). New York: Grune and Stratton, 1976.

Orme, Michael. Come to think about it. Toronto: Ontario Educational Communications Authority. 1979.

Ornstein, Robert. The Psychology of Consciousness. San Francisco: W.H. Freeman and Company, 1972.

Ornstein, Robert. Right and left thinking, Psychology Today, May 1973.,pp. 87-91.

Ostrander, S. and Schroeder, L. Superlearning. Delacorte Press, 1979.

Pfeiffer, Carl C. Mental and Elemental Nutrients. New Caanan, Connecticutt: Keats Publishing, 1975.

Pirozzolo, F.J. and Rayner, K. Cerebral organization and reading disability. Neuropsychologia, 1979, 17, 485-489.

Pirsig, Robert. Zen and the Art of Motorcycle Maintenance. New York: William Morrow. 1974.

Rabinowicz, T. The differentiate maturation of the human cerebral cortex. In F. Falkner and J.M. Tanner (Eds.), Human growth: 3, Neurobiology and Nutrition. New York: Plenum Press, 1979.

Rogers, Carl. Client Centered Therapy. Boston: Houghton Mifflin Co., 1951.

Samples, B. The Metaphoric Mind. Reading, Mass.: Addison-Wesley Publishing Company, 1976.

Samuels, M. and Samuels, N. Seeing with the Mind's Eye: The History, Techniques and Uses of Visualization. New York: Random House, 1975.

Sergent, Justine. Canadian study frames new right/left paradigm. Brain/Mind Bulletin, 1983, 8 (7), 1.

Strauss, Stephen. Boys beat girls in controversial study. Globe and Mail, September 3, 1981.

Waber, D. Sex differences in mental abilities: Hemispheric lateralization and rate of physical growth in adolescence. Journal of Developmental Psychology, 1977, 13, 29-38.

Wada, J.R., Clarke, R., and Hamm, A. Cerebral hemisphere asymmetry in humans. Archives of Neurology, 1975, 32, 239-246.

Wasserstein, J.R. and Yahraes, H. The Child's Emotions: How Physical Illness Can Affect Them. (US DHEW Publications No. (ADM) 77-497). Washington D.C.: Government Printing Office, 1977.

Weintraub, Pamela. The brain: His and hers. Discover, April 1981, pp. 15-20.

Wender, P.H. Minimal Brain Dysfunction in Children. New York: Wiley, 1971.

Witelson, S.F. and Pallie, W. Left-hemisphere specialization for language in the newborn: Neuroanatomical evidence of asymmetry. Brain, 1973, 96, 641-646.

Wurtman, Richard. Brain muffins. Psychology Today, October 1978, p. 140.

Wurtman, Richard J. Nutrients that modify brain function. Scientific American. April 1982, pp. 50-59.

USER REQUIREMENTS FOR THE MICROCOMPUTER APPLICATION OF THE REPERTORY GRID

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1. PURPOSE

This report details the user requirements for an interactive microcomputer version of the Repertory Grid. The Repertory Grid is a technique which can be used to assist individuals in making career decisions. The information provided by individuals is useful to CEIC in understanding how career decisions are made.

The Repertory Grid is generally administered by one individual (e.g. counsellor) with another (e.g. client). The grid is then analyzed using various statistical computer programs.

The development of a microcomputer software package is seen as an efficient way of administering and scoring the Repertory Grid.

2. USER REQUIREMENTS

2.1 Data Input

The individual supplying the data is the CEIC client. The client is assumed to be inexperienced with computers. Therefore, the administration of the Repertory Grid needs to be interactive and user friendly. Hand administration of the Grid averages approximately 30 minutes but can vary depending upon the client.

The final product of the input procedures is an m x n matrix (X) of data where m represents the number of rows and n represents the number of columns. The matrix will vary in size from $6 \leq n \leq m < 20$. The value of each cell in the matrix will range from $1 < Xi < j \leq 7$ where Xij represents the value in the jth column of the ith row.

The input procedures for the construction of the matrix consist of three steps:

(i) the development of the column labels (called "elements");
(ii) the development of the row labels (called "constructs"); and
(iii) the development of the cell values (elements x constructs).

2.1.1 Column Labels (elements)

The number of columns in the matrix X is $6 \leq n \leq 20$. The labels for the columns are referred to as elements and represent the individual's interpretation of the topic under discussion. The labels for the elements are provided by the user in a sequential manner. The means of obtaining this information can vary for different applications of the Repertory Grid. For example, the user may be prompted by statements related to the topic or simply asked to list as many elements as possible. This procedure continues until a preset number of elements have been listed or the number elicited falls within the appropriate range (i.e. $6 \leq n \leq 20$).

2.1.2 Row Labels (constructs)

The number of rows in the matrix is $6 < n < m < 20$. The labels for the rows, as for the columns, are the interpretation of the user. The procedure for the development of these labels is as follows:

(a) randomly select 3 elements (i.e. column labels) and present to the user;
(b) user is asked to chose two that are alike in some way but different from the third;
(c) the user is asked to type in a label which describes how the two are alike. This statement becomes the first row label (i.e. construct #1);
(d) the user is asked to type in a label which describes how the third element is different. This becomes the second row label (i.e. construct #2).

Steps a to c are repeated until the user is unable to provide any new constructs, or the maximum/minimum number has been reached.

2.1.3 Development of the Cell Values (i.e. grid construction)

This step requires the user to rate each element by each construct on a scale from 1 to 7. The procedure is as follows:

(a) randomly select a construct;
(b) have user rate each element in turn by the construct on a scale of 1 to 7.

Steps "a" and "b" are repeated until all elements have been rated by all constructs. The product is a matrix (X) with "m" rows and "n" columns and cell values of $1 \leq X_{ij} \leq 7$.

M	n. X.1	n.2 X.2	X.3	X.4	X.5	X.6	...	Nn X.n
X1.								
X2.								
X3.								
X4.								
X5.								
X6.								
X7.								
							Xij	
Xm.								

$6 \leq m \leq n \leq 2$

$1 \leq X_{ij} \leq 7$

$= X$

This matrix of data is then processed using a series of statistical analysis routines.

2.2 Processing Procedures

The processing of the matrix X of raw data contributed by a client is a key feature in the computer application of the Repertory Grid. The statistical procedures are designed to transform the data into a simpler, more easy-to-understand form.

Principal Compenent Analysis (PCA)

The main statistical technique chosen is Principal Component Analysis. The computational procedures are briefly described below with complete formulation in Appendix A.
For the given matrix X:
The data is centred:

i) by column;
the mean for each column in X is subtracted from the entries in the column, resulting in a new value matrix D where

$$dij = xij - \overline{X}i$$

ii) by row;
the mean for each row in D is subtracted from the entries in the column, resulting in a new value matrix A where

$$aij = dij - \overline{D}i$$

Principal Components are calculated using Singular Value Decomposition (SVD)

SVD is a complex statistical computational procedure with a variety of applications including the computation of Principal Components. A program for SVD is available in FORTRAN (Forsythe, 1978). It is based upon a statistical routine developed and written in Algol by Golub and Reinsch (1970) and has high validity and reliability. Use of this program would assure the computational accuracy required. The input to SVD is the (m) x (n) matrix A above, and two logical variables which indicate whether or not the matrices U and V are to be computed (in this case it will always be true). The output is W, the "n" singular values (usually, but not necessarily in decreasing order).

e.g.

$$\begin{array}{ccccc} W_1 & e & 0 & \cdots & 0 \\ 0 & W_2 & 0 & \cdots & 0 \\ 0 & 0 & W_3 & \cdots & 0 \\ 0 & 0 & 0 & & W_n \end{array} = W$$

Also an (m) x (n) matrix U representing the weight loadings of the elements on the Principal Components,

e.g.

$$\begin{array}{cccccc} & W_1 & W_2 & W_3 & \cdots & Wn \\ X._1 & & & & & \\ X._2 & & & & & \\ X._3 & & & & & \\ . & & & & & \\ . & & & & & \\ . & & & & & \\ X.n & & & & & \end{array} = U$$

and an (m) x (n) matrix V representing the loadings of the constructs on the Principal Components,

e.g.

$$\begin{array}{cccccc} & W_1 & W_2 & W_3 & \cdots & Wn \\ X_1 & & & & & \\ X_2 & & & & & \\ X_3 & & & & & \\ X_4 & & & & & \\ . & & & & & \\ . & & & & & \\ . & & & & & \\ Xm & & & & & \end{array} = V$$

The diagonal matrix W represents the singular values used for computing U and V. These values, when squared, represent the contributing variance of each component. The per cent variance that each component contributes to the total picture is then calculated by:

$$C_i = \sum_{i=1}^{n} \frac{W_i^2}{(W_i^2 + W_2^2 + \ldots + W_n^2)}$$

W_i = Singular value i

3. ADDITIONAL INFORMATION

Two other computations are made to provide further information to the user. There are:
  (a) a correlation matrix for constructs; and
  (b) a distance matrix for the elements.

3.1 Correlation Matrix for Constructs

The input data for this procedure is the raw data matrix X. All pairs of constructs are correlated as follows.

X = (m) x (n) matrix

$$r_{ab} = \Sigma \frac{XaXb}{[\Sigma\ (X_a - \bar{X}_a)^2 \quad \Sigma(X_b - \bar{X}_b)^2]\ 1/2}$$

The resulting matrix R is an (m) x (m) matrix where rab is the correlation coefficient for constructs X_a and X_b.

3.2 The Distance Matrix for Elements

The input data for this procedure is matrix U which represents the coordinates for the elements on the Principal Components. The distance between any pair of elements is calculated as follows:

$$d_{ab} = \Sigma\ [(X_a Y_a - X_b - Y_b)^2]^{1/2}$$

The resulting matrix D is a (n) x (n) matrix where dab is the distance between element a and element b.

4. OUTPUT PROCEDURES

There are two parts to the output:
  1. statistical tables; and
  2. a graphical representation of the data called a "map"

Statistical Tables

The tables to be printed are as follows:
  a) the DATA MATRIX, with appropriate column and row labels;

b) the CENTRED MATRIX A;

c) the SVD matrices (U, V, W).

   i) Element Component Loadings (U)
      U - an (m) x (n) matrix with elements represented by rows and principal components represented by columns. The order will correspond to the order of the singular values and in most cases will be from largest to smallest.

   ii) Construct Component Loadings (V)
      V - an (m) x (n) matrix with constructs represented by rows and components represented by columns. As with the element matrix V, the order of the components corresponds to the order of the singular values.

   iii) Singular Values Matrix (W)
      W - an (n) x (n) matrix with singular values listed in the diagonal and zeros elsewhere.

d) Percent of Variance
   This table represents the principal components in order of decreasing value. The percent variance of each component is stated next to each component.

e) Correlation Matrix for Constructs
   This is an (m) x (m) matrix R with constructs labelled on the horizontal and vertical axes. The cell entries represent the correlation between all pairs of constructs.

f) Distance Matrix for Elements
   This is an (n) x (n) matrix D with elements listed on the horizontal and vertical axes. The cell entries represent the calculated distance between all pairs of elements.

5. THE MAP

The map is a two dimension graphical representation of the data. The data used for constructing the map is found in sections c and d above. The procedures for constructing the map are as follows:

a) The Axes
   The axes of the map represent the 1st and second largest components. They range in length from -1 to +1 and intersect, perpendicularly, at the origin (0,0). The horizontal axis is typically the largest component. This axis can be labelled by the % variance as printed in 1d opposite component 1. The vertical axis represents the second largest component and is labelled by the % variance printed in 1d opposite component 2.

b) Plotting the Elements
   The elements are plotted on the map using the values in the Element Component Loadings Table.

The columns representing the 1st and 2nd component loadings correspond to the order of the singular values. The values of the loadings which range in size from -1 to +1, can be used as coordinates to plot each element. It would be desirable to label the elements on the map. This may produce considerable crowding, particularly where elements cluster closely together. Alternatively, then, the elements can be numerically coded on the map, and then labels put in a table below the map.

c) Plotting the Constructs
The constructs are plotted in a similar manner to the elements. The coordinates are found in the Construct Components Loading Table. As with the elements, the 1st and 2nd component loadings are found in the same order as the singular values. Once identified, these values are used as coordinates to plot the constructs. As with the elements, the labelling of the constructs on the map is desirable. Alternatively, they may be alphabetically coded on the map with the labels being added in a subsequent table.

6. OTHER CONSIDERATIONS

Hardware

The use of SVD program described in this report places some restriction on the hardware. (The program is written in FORTRAN as are many mathematical procedures). Therefore the microcomputer would necessarily have a FORTRAN capability. As well, the calculation of PCR (Personal Construct Ratio), has been given 128K capacity by some programs (e.g. BMDP, SPSS).

Software

The fact that the SVD is written in FORTRAN requires the remaining elements be written in FORTRAN as well. To change the SVD to BASIC would require the aid of a statistician to ensure the accuracy of the program. As the present program has high credibility, it would be easier to adapt the remaining elements of the program than vice versa.

REFERENCES

Forsythe, G.E., Malcolm, M.A. & Moler, C.B. Computer Methods for Mathematical Computations. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1977.

Golub, G.H. & Reinsch, C.H. Singular Value Decomposition and Least Squares Solution. Numerical Mathematics, 1970, 14, 403-20.

APPENDIX A

1. CENTERING DATA (left centering)

X = n x m matrix with $x_{\square\beta}$ entities $\quad m<n$, $n \leq 20$

Centering by column or right centering is the subtraction of the column mean from each variable in that column. This results in a matrix whose columns have 0 means and with deviation of variables around zero.
Computation step 1. sum column scores, divide by no. of entries (m) to obtain column mean.

$$\begin{array}{lllll}
 & n & & \cdots & \\
m & x_{11} & x_{21} & \cdots & x_{m2} \\
 & x_{12} & x_{22} & \cdots & x_{n2} \\
 & x_{13} & x_{23} & \cdots & x_{n3} \\
 & x_{14} & x_{24} & \cdots & x_{n4} \\
 & x_{15} & x_{25} & \cdots & \\
 & \vdots & \vdots & \vdots & \vdots \\
 & x_{1m} & x_{2m} & & x_{nm}
\end{array}$$

Column Sum: $\Sigma\ X1m \quad \Sigma\ X2m \quad \Sigma\ XNM$

Column Mean: $\frac{\Sigma\ X1m}{m} = X1 \qquad \frac{\Sigma\ Xnm}{m} = Xnm$

2. CENTERING DATA (right centering)

STEP 1: take resulting matrix above, subtract row means from row entities

$$\begin{array}{llllllll}
 & & & & & \text{Row Sum} & & \text{Row Mean} \\
d_{11} & d_{21} & \cdots & d_{n1} & \Sigma d_{n1} & \frac{\Sigma d_{n1}}{n} & = & \bar{D}_1 \\
d_{12} & d_{22} & \cdots & d_{n2} & \Sigma d_{n2} & \frac{\Sigma d_{n2}}{n} & = & \bar{D}_2 \\
\vdots & \vdots & & \vdots & \vdots & & & \\
d_{1m} & d_{2m} & \cdots & d_{nm} & \Sigma d_{n2} & \frac{\Sigma d_{nm}}{n} & = & \bar{D}_m
\end{array}$$

STEP 2: Subtract row means from row entries

$$\begin{array}{lllll}
d_{11} & \bar{D}_{.1} & d_{21} - \bar{D}_{.1} & \cdots & d_{n1} - \bar{D}_{.1} \\
d_{12} & \bar{D}_{.12} & d_{12} - \bar{D}_{.1} & \cdots & d_{n2} - \bar{D}_{.2} \\
 & & & & \\
d_{1m} & \bar{D}_{.m} & d_{1m} - \bar{D}_{.m} & \cdots & d_{nm} - \bar{D}_{.m}
\end{array}$$

let new matrix be A

STEP 3: Subtract column mean from column entries

$$\begin{array}{llll}
x_{11} - \bar{X}_{1.} & x_{21} - \bar{X}_{2.} & \cdots & x_{n1} - \bar{X}_{n.} \\
x_{12} - \bar{X}_{1.} & x_{22} - \bar{X}_{2.} & \cdots & x_{n2} - \bar{X}_{n.} \\
x_{1m} - \bar{X}_{1.} & x_{2m} - \bar{X}_{2.} & \cdots & x_{nm} - \bar{X}_{n.}
\end{array}$$

let new matrix be D with entries $d_{.1} \ldots d_{nm}$

$$\begin{array}{llll}
d_{.1} & d_{21} & \cdots & d_{n1} \\
d_{.2} & d_{22} & \cdots & d_{n2} \\
d_{1m} & d_{2m} & \cdots & d_{nm}
\end{array}$$

APPENDIX B

CORRELATION MATRIX (for constructs)

$X = m \times n$ matrix

m (rows) $\le n$
n (columns) ≤ 20

$$\begin{array}{ccccc}
x_{11} & x_{21} & x_{31} & \cdots & x_{n1} \\
x_{12} & x_{22} & x_{32} & \cdots & x_{n2} \\
x_{1m} & x_{2m} & x_{3m} & \cdots & x_{nm}
\end{array}$$

$$\Downarrow$$

$$\begin{array}{c|ccccc}
 & x_1 & x_2 & x_3 & \cdots & x_m \\
\hline
x_1 & r_{11} & r_{12} & r_{13} & \cdots & r_{1m} \\
x_2 & & r_{22} & r_{23} & \cdots & r_{2m} \\
x_3 & & & r_{33} & \cdots & r_{3m} \\
x_m & & & & & r_{mm}
\end{array}$$

APPENDIX C

DISTANCE MATRIX (for elements)

FROM FACTOR LOADINGS:

$p \leq n$

$$\begin{array}{lllll}
\text{FACTOR} & & Y_1 & Y_2 & Y_3 \ldots Y_p \\
\text{elements} & x_1 & x_1y_1 & x_1y_2 & \\
 & x_2 & x_2y_1 & x_2y_2 & \\
 & x_3 & & & \\
 & \vdots & & & \\
 & x_n & & &
\end{array}$$

$$\downarrow$$

$$\begin{array}{lllll}
 & x_1 & x_2 & x_3 \ldots & x_n \\
x_1 & d_{11} & d_{12} & d_{13} & d_{1n} \\
x_2 & & d_{22} & d_{23} & d_{2n} \\
x_3 & & & d_{33}. & d_{3n} \\
\vdots & & & \ddots & \\
x_n & & & & d_{nn}
\end{array}$$

COMPUTATION

for any two variables (elements) x_1 x_2

$$D = \Sigma[(x_1y_1 - x_2y_1)^2 + (x_1y_2 - x_2y_2)^2 + (x_1y_3 - x_2y_3)^2 \ldots (x_1y_p - x_2y_p)^2]\ 1/2$$

$$= \frac{p\ (x_1 - \bar{x}_1) \qquad (x_2 - \bar{x}_2)}{[p\ (x1 - \bar{x}1)2 \qquad p(x2 - \bar{x}2)2 \quad 1/2} = \frac{p\ x_1 \qquad x_2}{[px12 \qquad px2\ 2]1/2}$$

1	2	3	4	5	6	7	
x_1	x_2	x_1	x_2	$x_1{}^2$	$x_2{}^2$	xy	
x_{11}	x_{12}	X_{11}	X_{12}	$X_{11}{}^2$	$X_{12}{}^2$	X_1	X_2
x_{21}	x_{22}	X_{21}	X_{22}	$X_{21}{}^2$	$X_{22}{}^2$	X_1	X_2
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
x_{n1}	x_{n2}	X_{n1}	X_{n2}	$X_{n1}{}^2$	$X_{n2}{}^2$	X_{n1}	X_{n2}
px_1	px_2			$pX_1{}^2$	$pX_2{}^2$	pX_1	pX_2

mean $\frac{px_1}{n}$ $\frac{px_2}{n}$

$= \bar{x}_1 \quad \bar{x}_2$

repeat for all pairs of constructs

A REVIEW OF THE REQUIREMENTS FOR THE COMPUTER APPLICATION OF THE REPERTORY GRID IN CEIC CAREER COUNSELLING

Heather Hopwood, for Employment Support Services Branch, Employment and Immigration Canada

I. INTRODUCTION

The Repertory Grid Technique has become a popular means for investigating and explaining individual perceptions of the world. Originally developed by Kelly (1955) as a clinical diagnostic tool, the technique has proven to be useful in a wide variety of areas requiring the understanding and/or input of individuals' views of situations.

Most recently, this technique was applied in the investigation of career adaptation (Hopwood, 1981). Here, the Repertory Grid was used to measure individual self-concept formation in an occupational context. Analysis on the data gathered from a sample of individuals has indicated that particular patterns exist which may be related to different stages of career progression and adaptation. This information becomes important in the design and development of appropriate intervention measures.

In addition to its use as an investigative tool for the researcher, it has proven useful to individuals in providing a means for objectifying their perceptions and permitting decisions to be made on matters of concern to them. For example, in job selection, individuals are able to determine their own subjective criteria for rating jobs. Analysis on this matrix of information can help individuals to identify the job which most closely meets their personal requirements (Eshragh, 1981).

Therefore, the Repertory Grid can meet two needs at once. It provides the individual with a simple means for reflective decision-making on matters of importance, and, simultaneously, it provides a means for the researcher to investigate the decision-making processes of individuals.

Other areas for use of this dual capacity of the Repertory Grid are not difficult to find: for example, the technique has been used to identify individuals' expectations concerning a training program (Easterby-Smith, 1980). This information is useful in assisting the individual in clarifying career goals while at the same time providing training personnel with a means for evaluating and designing their programs (e.g. Honey, 1979).

One study used the Repertory Grid to collect information regarding the criteria students were using to decide about the university they wished to attend (Reid and Holley, 1972). The intent of the study was to demonstrate the Repertory Grid Technique to be an effective technique for collecting and categorizing criteria which could subsequently be provided to institutions for the development and dissemination of future information. The same measures that individuals use in discriminating between universities can also be used to assist them in determining their best choice. By rating each university by their own criteria, subsequent analysis can help identify which one most closely represents their ideal or most acceptable choice.

Another study was designed to assist managers in writing job descriptions (Smith, 1978). Managers first listed the activities required by the job. They next determined the types of skills required by the activities. Subsequent rating of the activities by skills produced a matrix wherein each activity was given a numerical value based upon the importance of each skill to the activity. Principal Component Analysis indicated groups of activities considered most closely related and, as well, ranked the clusters in order of importance to the job. Similar analysis on skills would indicate those most closely related and rank them in order of importance. This information could assist managers in job description writing while, also providing occupational researchers with data on the skills and activities required to perform certain jobs.

Applications of the Repertory Grid Technique have been slow to develop for two reasons. First, its administration requires considerable time. Second, the subsequent analysis of the resulting data have come to require computer processing as the number of elements and constructs and the size of the rating scales have increased. The former has now been resolved through the use of interactive computer technology while the latter has been resolved through the accessibility to a number of commercial statistical packages.

II. Purpose of Report

The purpose of this paper is to examine the application of the Repertory Grid to career counselling in the CEC by:

1. identifying CEIC requirements in terms of the Repertory Grid administration, analysis and interpretation;
2. reviewing current interactive computer systems, especially microcomputer systems, employing the Repertory Grid Technique; and,
3. identifying the options for the development of a microversion of the Repertory Grid.

III. CEIC Requirements for the Application of the Repertory Grid

The full usefulness of the Repertory Grid to CEIC lies in its capacity to serve both client and organization. Therefore, the method of application adopted must respond to the needs of both.

A. Client Needs:

The use of the Repertory Grid by clients permits them a means for objectifying their perceptions of situations. Therefore, the program must be easy for clients to use and understand. As well, the information produced must be seen by clients as a reasonable representation of their perceptions. To ensure this latter objective, an end product that can be quickly grasped by the clients, without interpretation by another (e.g. counsellor) of the underlying meaning, is required.

B. Organizational Needs:

The organization may be viewed from two broad perspectives:

1) The researcher-developer
From the researcher's perspective, it is important that the information generated provides a means for examining and comparing all clients or specific groups of clients in order to do further policy and programme developments.

2) The counsellor
From the counsellor's perspective, it is important that the procedures involved be efficient. Therefore, the procedure should allow for as much independent input as possible by the client. As well, the information produced should be easily understood by counsellors, permitting them an at-a-glance view of the clients' perspectives, for further counselling, if necessary.

With these considerations in mind, it is necessary to review the various procedures involved in the application of the Repertory Grid to determine a suitable methodology for CEIC.

IV. Repertory Grid Procedures

There are five steps involved in the Repertory Grid procedures. These are:

A. elicitation of elements;
B. elicitation of constructs;
C. grid construction (i.e. rating of elements by constructs);
D. grid analysis; and,
E. interpretation of results.

A. Elicitation of Elements

The elements represent a survey of the subject matter of interest to the individual or the researcher-developer. They may consist of people, objects, situations or careers, depending upon the topic under study. For example, if the investigation is on the indiviudal's attitudes towards different jobs, elements could consist of jobs familiar to the individual. If interest is in the individual's perception of job requirements, the elements may consist of duties or activities of the job. The main consideration is that the elements be "homogeneous"; that is, they should all be of the same type.

Another consideration is that the selection of elements be representative of the topic. Kelly, in order to ensure an extensive coverage of the individual's personal situation, provided subjects with a list of 22 elements. Individuals then supplied names to the characteristics described. Recent research, however, has indicated that such an extensive list is not necessary to obtain meaningful representation of topic (e.g. Easterby-Smith, 1981; Stewart & Stewart, 1981). As a result, alternative methods for obtaining elements have evolved such as simply requesting a list of elements from the individual or providing a short list. In some cases, a combination of generated and supplied elements are used. For example, in the Career Adaptation study (Hopwood, 1982), the main interest was the study of self-concept formation in a work context. A list of occupations was generated by the individual to ensure that the constructs would be work-related. In addition, three selfconcepts (the ideal, the actual, and the social self) were added to the list for rating by constructs at a later stage. It should be noted that the number of elements never exceeded 12 and averaged around 10.

The best technique for obtaining a list of elements is very much a function of the purpose of the exercise. If the individual is using the system to investigate a particular area of interest, he/she may have elements already in mind. If, on the other hand, a researcher is interested in obtaining particular information, a prompting system or a supplied list is probably a better approach.

B. Elicitation of Constructs

If elements are considered the objects of a person's thoughts, then constructs may be thought of as the qualities the person attributes to these objects.

Like elements, constructs may be supplied or elicited or the two procedures combined (e.g. Honey, 1979) depending upon the requirements of the individual or investigation.

Traditionally, constructs have been generated by randomly presenting triads of elements and asking the individual to select two which are alike in some way but different from the third. The characteristics given are then recorded and another three elements are randomly selected.

Although bipolar constructs (e g. good-bad) have been the rule in the past, they present problems in terms of application to all elements. For example, although the distinction of good-bad may apply to some elements, it may not apply to them all. This creates a rating problem if neither pole applies to the element. To overcome this difficulty, the poles may be split to form two separate constructs or only one pole of the construct, the "emergent" pole, is recorded.

Again, as with elements, an extensive list is not required. In fact, it has been found that individuals produce, on the average, about seven constructs which are most significant. Additional constructs tend to be variations or repetitions which add little information (Shubsachs, 1975).

C. Grid Construction

Once the elements and constructs have been established, the individual begins to complete the matrix which results from using the elements as the horizontal axis, and constructs as the vertical axis. Each element is rated by each construct in turn. To achieve this, the individual is asked to provide a numerical value (usually from 1 to 5 or 7) to describe the extent to which each construct represents the elements being considered. When completed, each element will have a score for each construct.

Although the rating scale can vary from a simple dichotomy to any desirable number (some have used scales of 100 units), a range of 5 to 7 units seems to be most suitable and practical. A larger scale tends to leave values unused while a smaller scale may not adequately describe the situation.

D. Grid Analysis

The need for computer programs to analyze grid data increases with the size of the grid and/or the size of the rating criteria. Although scoring by hand is possible it is tedious and very time consuming. Two forms of computer analysis are routinely used in analyzing grid data - Cluster Analysis Techniques and Principal Component Analysis.

1. Cluster Analysis Techniques

Basically, cluster analysis develops relationships amongst the data variables through a set of algorithms. There are a number of different approaches to cluster analysis which can lead to different patterns being established. Therefore, for interpretation purposes, it is important to understand how the relationships are constructed.

One approach is Hierarchical Cluster Analysis. From the matrix of data, correlation or distance scores are devised for each construct with every other construct and for each element with every other element. Correlation scores range from 0 to ± 1. A score of 0 means that the two variables are not related at all while a score of + 1 means that they are strongly related. Clustering begins by identifying those constructs which are most highly related and linking them together to form a new construct. The new linkage is then related to other constructs or clusters to form another new linkage. The resulting pattern is shaped somewhat like a tree as shown in Figure 1.

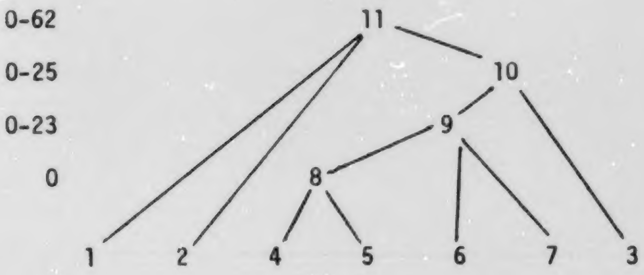


Figure 1. Single-link cluster analysis of construct distance matrix.

This method uses the distance between variables as a measure of relationship and following the procedure described above, for correlation data, develop clusters. However, the patterns can vary significantly based upon the "relationship" score used to cluster.

2. Principal Component Analysis (PCA)

Whereas Cluster Analysis attempts to build relationships among elements (or constructs) based upon the maximum association between the variables, Principal Component Analysis tries to establish an overall pattern that best explains the relationship among all the variables. This is accomplished by first establishing a relationship (e.g. correlation) of each element (or construct) with all other elements or constructs. The next step is to determine a line (i.e. component) through the variables which best explains this relationship. This is followed by the determination of a second line which is unrelated or orthogonal to the first. This procedure is continued until the total relationship amongst the variables is explained by a few dimensions. By using the first two lines or components as axes, the variables can then be plotted in a two dimensional space, much like the towns or cities on a map. This map represents, then, an approximation of the mental map of the individual and how he/she views a particular situation. An example of such a map is given in Figure 2.

Another way of viewing the difference between Cluster Analysis and Principal Component Analysis is "to imagine the stars of the sky spread out above one." These stars represent the elements in an individual's mental map - whether they be people, situations or objects. The purpose of the computer program is to find some way of describing all these points. The "Cluster Analysis" approach looks for patterns in different parts of the sky and identifies the major groupings, like the constellations. Thus, the structure of the map is built up gradually from various small groupings. The "Principal Component Analysis" approach contrasts with this by looking at the sky to identify the main overall dimensions. Thus it might note that the plane of the Milky Way is the most dominant dimension in the sky as viewed from the Earth, and it would then describe all the objects in terms of coordinates from this plane. Or it might decide that the Solar System, or the Earth's axis, provided the most convenient frames of reference upon which to build a "stellar map" (Easterby-Smith, 1981, p. 22).

E. Interpretation of Results

The decision as to which analysis technique to use is in part dependent upon how the information is to be used and in part a matter of preference. Each

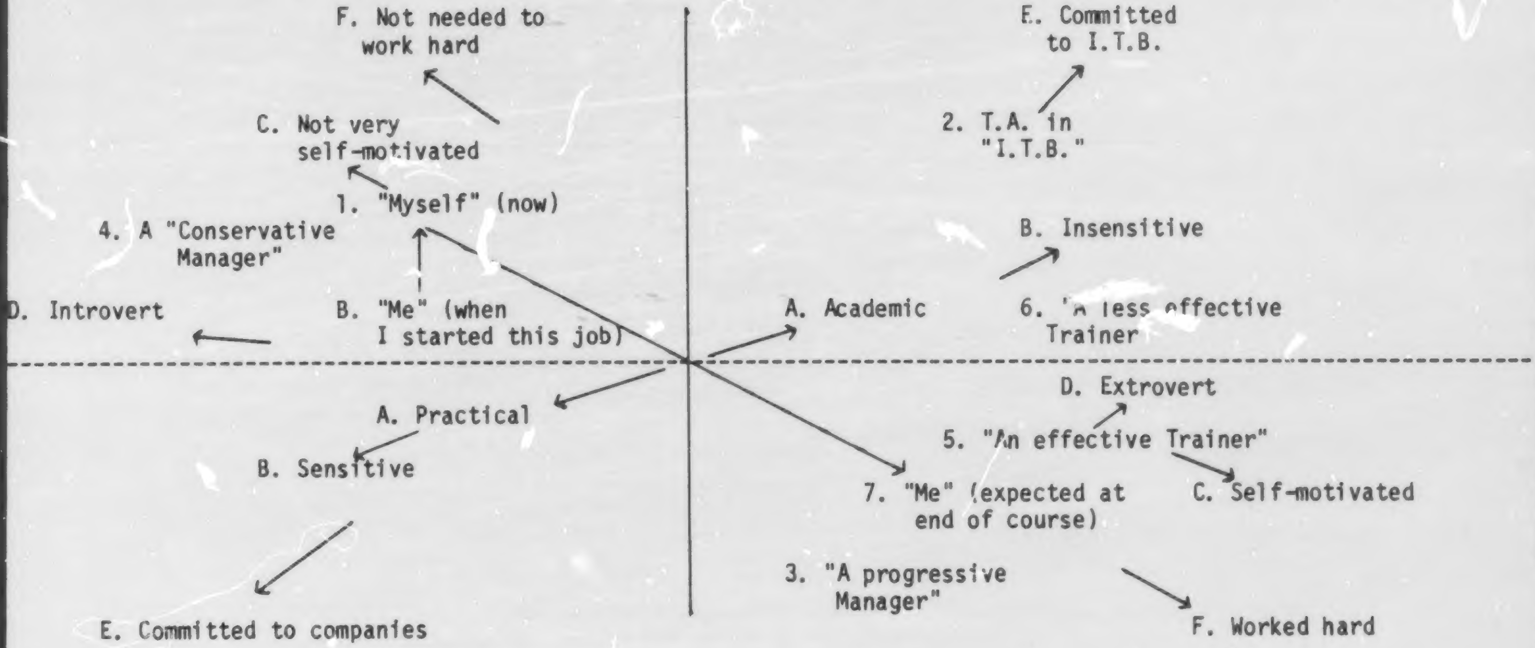

F. Not needed to work hard
C. Not very self-motivated
1. "Myself" (now)
4. A "Conservative Manager"
D. Introvert
B. "Me" (when I started this job)
A. Practical
B. Sensitive
E. Committed to companies
E. Committed to I.T.B.
2. T.A. in "I.T.B."
B. Insensitive
A. Academic
6. "A less effective Trainer"
D. Extrovert
5. "An effective Trainer"
7. "Me" (expected at end of course)
C. Self-motivated
3. "A progressive Manager"
F. Worked hard

Figure 2: Mapping of constructs and elements on first 2 components

has its merits and demerits. It is important to bear in mind that a unique feature of the Repertory Grid Technique is its dual ability to provide clients with a personal decision making tool while also providing the organization with profiles on its clients. Therefore, the advantages and disadvantages of Cluster Analysis and PCA are examined from both perspectives.

1) The client perspective

It is important when considering the client-user that the result of the exercise be easily understood while at the same time provide as complete and accurate an image as possible. Table 1 compares the two programs, Cluster Analysis and PCA, from the client's perspective. The Cluster Analysis technique is easier to follow in the transition from the raw data to the final picture. It also has the advantage of being complete in that it shows the relationship between all constructs and all elements. From the client's perspective, however, these features may not be as important as the ease in interpreting the image that PCA provides. Although the first two components will not explain the total picture, a great portion of the mental image (usually more that 50%) is described. PCA also has the advantage of describing clusters of elements/constructs on the graphical image. That is, elements and constructs which are significantly related will appear close together (i.e. in clusters) on the visual map.

2) The organization's perspective

a) From the researcher-developer's point of view, Principal Component Analysis provides a more statistically complete picture of the raw data. The Cluster Analysis techniques typically used in analyzing grids (and there are many other approaches to cluster analysis) employ a measure of relationship, such as correlation, to build up the hierarchical relationships among constructs and among elements. PCA extends the analysis by taking the "relationship" information and identifying unique dimensions which can describe the relationships among the elements constructs. This procedure provides more information to the researcher in determining such things as cognitive complexity (i.e. the number of independent dimensions required to explain the relationship). As well, the visual image created by the components allows for the observation of patterns (i.e. groupings of constructs and elements which can be easily compared across individuals as well as indicating changes within individual patterns as a result of some intervention).

TABLE 1: A comparison of output from Cluster Analysis and Principal Components Analysis from a client's perspective.

	Cluster Analysis	Principal Components Analysis
1.	All the detail of the relationship between elements/constructs is retained in the visual presentation.	When only two dimensions are used, some details of the relationship between elements/constructs are lost. However, key features are retained.
2.	The transition from the raw data to the output is relatively easy to follow.	The transition from the raw data to the output is often difficult to follow.
3.	The image created (i.e. dendogram or tree) requires extensive interpretation to understand the relationship between elements and constructs.	The relationship between elements and constructs retained for presentation (i.e. cognitive or mental map) are easily understood.

b) From the counsellor's perspective, the benefits of PCA over Cluster Analysis would be much the same as for the client. The ease in interpretation permits clients more independence and avoids counsellor interpretation of the meaning. From an organizational viewpoint, both the amount of time training the counsellor in Grid interpretation and the amount of time the counsellor must spend with the individual client are both reduced if PCA is used.

It is concluded, therefore, that Principal Component Analysis best serves the objectives of CEIC. The following sections are based upon this conclusion.

V. Proposed Model for CEIC

Based upon the preceding analysis of CEIC requirements, this section describes a model which has been developed to fully satisfy all aspects of the CEIC situation.

Table 2 is a summary of the procedures for the application of the Repertory Grid in a CEIC context. In considering a computerized application, the procedures have been divided into three steps:

A. data input
  1) elicitation of elements
  2) elicitation of constructs
  3) rating of elements by constructs
B. data analyses
C. data output

A. Data Input

The result of this stage is a matrix which represents the relationship between constructs (listed on one axis) and elements (listed along the other axis).

1) Elicitation of elements

   The area of interest is specified (e.g. occupation/job selection). A prompting system (e.g. "An occupation which you would like".) is the easier method for obtaining a list of appropriate elements related to the topic. If particular elements are wanted (e.g. self concept), they may be added to the list. A minimum of 6 elements are required to ensure adequate information for analysis. A maximum of 20 should be sufficient to meet all clients needs.

2) Elicitation of constructs

   The triad approach seems the most effective in producing constructs and is easy to understand by clients. Clients are presented with three elements (randomly selected) and asked to chose two that are alike in some way but different from the third. The labels used to describe the elements (i.e. constructs) are typed in by the clients, one at a time. The triad presentation continues until the client cannot think of any new constructs or the maximum is reached.

3) Rating of elements by constructs

   One construct is randomly selected and presented to the client. The client is then asked to rate the elements, on a scale of 1 to 7, in order. The procedure continues until all elements are rated by all constructs.

TABLE 2: CEIC MODEL FOR THE COMPUTER APPLICATION OF THE REPERTORY GRID.

1. Data Input	
a) elicitation of elements	• identify areas of interest to CEIC • prompt clients to obtain list of elements (minimum of 6, maximum of 20)
b) elicitation of constructs	• elements are randomly selected and presented in triads • client is required to identify two which are alike and different from the third • bipolar construct is typed in, one pole at a time
c) grid construction	• constructs are presented one at a time • client uses each construct in turn to rate all elements on a scale of 1 to 7
2. Data Analysis	Principal Component Analysis
3. Data Output	• correlation tables for elements/constructs • all principal components with factor loadings and total variance • a graphic display, with components one and two as axes, with elements and constructs plotted on image

B. Data Analysis

The recommended data analysis method is the Principal Component Analysis (PCA).

C. Data Output

The information is displayed in map form with the appropriate labels added to the poles of the map and the elements plotted in relation to these poles. Instructions as to how to read the map (e.g. legend) can be added. Additional information which is of concern to the organization (e.g. per cent) variance accounted for by each component, a map of correlation tables are also collected.

VI. Current Microcomputer Applications: Focus and The Microgrid

Two interactive Repertory Grid microcomputer systems have been developed, one in Great Britain (Shaw and Thomas, 1981), called FOCUS, and one in Canada (Stones, 1982) called the Microgrid.

The Repertory Grid shows a great deal of flexibility in application and analysis depending upon user requirements. FOCUS is an example of a client-oriented application while the Microgrid is designed to assist clinical psychologists in counselling their clients.

A. FOCUS

FOCUS is in fact one of a set of computer programs (PEGASUS, FOCUS, MINUS, CORE, ARGUS, SOCIOGRIDS) which have been developed, "each one acting as a cybernetic tool to enhance man's capacities to understand both himself and his relationship with other perspectives of the world" (Shaw, 1981, p. 31). It is a reflective tool used by individual clients which can be applied to any context. Each program in effect is a modification or extension of the FOCUS program which is described below:

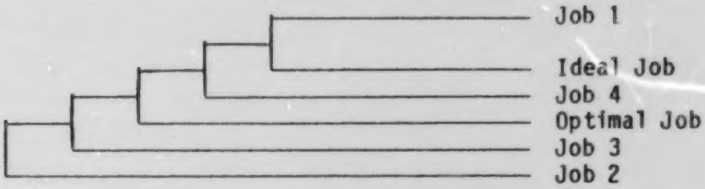
1. Data Input
   This stage of the interactive process involves the elicitation of elements (i.e. objects of the topic) and constructs (i.e. attributes of the objects) from the individual with subsequent grid construction (i.e. rating of elements by constructs).
   a) elicitation of elements
      The individual is asked to select a topic of interest (e.g. occupations) and then he/she is given the opportunity to list six elements which are representative of the topic.

b) elicitation of constructs
The elements are presented randomly in triads and the subject is asked to describe how two are alike and different from the third, each construct being typed in by the individual.

c) grid construction
The computer then presents each element in turn and the individual rates them by each bipolar construct on a scale of 1 to 5.
At this point, the subject is essentially finished his/her contribution and the computer then rearranges the information into an easy-to-understand form.

2. **Data Analysis**
Hierarchical Cluster Analysis techniques form the basis of all the programs.

3. **Data Output**
The information output is in the form of a dendogram or tree. Using interrelationship measures such as correlation, the elements/constructs, are ranged to show areas of greatest association to areas of weakest association. In this way, the subject can view the similarities/differences in meaning between different constructs based upon their application to elements. As well, similarities/differences in elements can be seen based upon the application of constructs. An example of typical output of this program for job decision-making is given below.



(Eshragh, 1981, p. 195)

Here, the program indicates that job 1 is most closely related to the ideal job while job 4 is closer to the optimal. Depending upon the individual's reference point, the program indicates the best option in terms of criteria given by the individual.

B. THE MICROGRID

Whereas the FOCUS program is geared to the client in terms of use, the Microgrid (and its occupational version, the Vocogrid) has, as its audience, the clinician who wishes to look at the present concerns of the client. The idea of the Microgrid is to provide an inexpensive and easy way to apply the grid. Subsequent analysis is then interpreted by the clinician to be used in further counselling. The procedure is described below.

1. **Data Input**
   The construction of the grid is quite similar to the approach used in FOCUS with some variations.

   a) elicitation of elements
      In the Microgrid, the subject is asked to provide a name for each role given (the program allows for up to 20 roles). In the Vocogrid version, the subject is prompted by statements such as "name of job you would like" for a maximum of 20 jobs.

   b) elicitation of constructs
      The subject is presented with a random selection of triads of roles and asked to give a bipolar construct which states how two are alike and different from the third. A total of 20 constructs can be given.

   c) grid construction
      The subject is then shown a randomly selected element and asked to rate the element on a scale from 1 to 10 on each bipolar construct (randomly ordered) in turn.

2. **Data Analysis**
   The analysis method used in this model is the Anchor Method of Cluster Analysis. Two constructs are selected to serve as axes on which to visually display the constructs. The first construct represents that which has the highest total common variance with all other constructs (found by squaring the correlation scores and summing). The second construct selected is one that has the next highest total common variance but which is also not significantly related to the first construct (at .05% level of significance). All other constructs can then be plotted on this map using the correlation tables to obtain the coordinates.

3. **Data Output**
   The information produced by this program does not provide a visual image of the data, only the means to construct one. The two constructs which may serve as axes are identified, with a correlation table for each with all other constructs. Therefore, anyone wanting to construct a map, could simply set up the constructs perpendicular to one another, with a zero origin and a scale ranging

from -1 to +1 in each area. Then using the correlation figures as coordinates, plot the constructs.

Because the axes are not truly orthogonal, the image produced requires considerable interpretation. For this reason, it would be unsuitable for use by clients without the assistance from someone knowledgeable about the statistics involved.

C. COMPARISON OF FOCUS, MICRO AND CEC MODEL

Table 3 describes in brief the FOCUS program and the Microgrid, comparing this information with what may be considered an appropriate model for use in CECs as described earlier.

1. Use

   The user, in the case of CEIC, would be both the client and CEIC. The client would be able to use the system for self-exploration and/or decision-making. CEIC would be able to use the information acquired from clients to study such concepts as career adaptation as well as identifying information needs of their clients. In the case of FOCUS, the primary user is the individual for self-exploration while in the Microgrid version, the program is intended to assist clinicians in counselling their clients. The user orientation does have an impact on the analysis techniques used and the complexity of the output with simpler methods being employed for client users.

2. Data Input

   Common to all programs is the development of a matrix of data with constructs listed along one axis and elements along the other. The cells have numerical values which represent the relationship between a single construct and a single element.

   The methodology for developing this matrix is very flexible. The methodology describing the CEC model was developed from a review of the literature describing the various procedures in use. From this was derived a method which seemed to be most efficient while surmounting some of the problems observed with other formats. For example, the splitting of bipolar labels into separate labels overcomes two problems noted in the literature:

   a) a bipolar label may not apply to all elements. Therefore, treating each pole as a separate construct permits the client to rate the element as not having this attribute; and

b) the use of opposite or different in constructing bipolar labels can lead to different types of constructs such as traditional opposites (e.g. black-white). Correlation analysis of the single pole construct will reveal the true bipolar meanings of the individual.

3. Data Analysis and Data Output
The data analysis methodology is selected with the user's needs in mind. Principal Component Analysis was selected for the CEC model as a more efficient means of analyzing the Repertory Grid. This technique, as described earlier, provides an easy-to-understand image for the client while providing highly useful information for the organization.

VII. Use of Available Systems vs New Development

Table 3 provides a summary of FOCUS, the Microgrid and the CEIC model for comparative purposes.

A. User

The design of any program, needless to say, is based upon the requirement of the intended user. Neither FOCUS nor Microgrid can collect comparative data on a number of clients. The CEIC model sees the users as both the client and CEIC. The different user orientations result in major descrepencies between the CEIC proposed model and available systems particularly in the data analysis and data output stages.

B. Data Input

Common to all Repertory Grid programs is the development of a matrix of data. The methodology for generating this matrix is very flexible. Important differences exist between the proposed approach and that taken by FOCUS and the Microgrid. For example, the splitting of bipolar constructs (e.g. good-bad) into separate constructs overcomes two problems noted in the literature. First, the bipolar construct may not apply to all elements and secondly, it allows for the identification of true bipolarities as viewed by client rather than traditional bipolar constructs.

C. Data Analysis

The data analysis procedure which is most efficient in meeting CEIC needs is Principal Component Analysis. Hierarchical Cluster Analysis Techniques employed by the FOCUS programs was selected for the ease with which the

Table 3: Summary of the computer applications of the Repertory Grid

	FOCUS	MICROGRID	
1. USER	client	clinician	client/organization
2. DATA INPUT			
a. elements	. client is asked to list elements related to topic (minimum 6)	. client is asked to provide names to specified roles or is prompted by questions to provide a role label (i.e. occupation) maximum 20	. identify areas of interest to organization and prompt client with questions to obtain list of elements (minimum 6, maximum 20)
b. constructs	. elements are randomly selected and presented in triads . client is requested to identify how two are alike and different from the third . client types in bipolar label	. elements are randomly selected and presented in triads . client is requested to identify two which are alike in some ways and different from the third . client types in bipolar label . maximum of 20 labels	. elements are randomly selected and presented in triads . client is requested to identify two which are alike in some way but different from the third . bipolar label is typed in but as separate labels
c. grid construction	. each element is presented and client is asked to rate element by each bipolar construct on a scale of 1 to 5	. an element is randomly selected . bipolar constructs are randomly arranged . client rates elements by constructs on a scale of 1 to 10	. constructs are presented one at a time . client uses each construct in turn to rate all elements
3. DATA ANALYSIS	. Hierarchical Cluster Analysis	. Anchor Method of Cluster Analysis	. Principal Component Analysis
4. DATA OUTPUT	. Dendogram (tree-like structure) depicting degree of association between elements/constructs	. identification of two constructs with highest common variance and unrelated at .05 level of significance . correlation tables for two constructs (graph is not part of output but data will allow for plotting of information by hand)	. correlation tables for elements/constructs . all principal components with factor loadings and total variance . a graphic display, with components one and two as axes, with elements and constructs plotted on image

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client-user could follow the transition from the data input to data output. Comparative profiles of clients would require further analysis.

The Anchor Method of Cluster Analysis (AMCA), employed by the Microgrid, bears a resemblance to PCA, but differs in two important ways:

1) In PCA, the first component (axis) is a unique dimension which describes the highest portion of the variance on the data. The variance accounted for by one construct, as in AMCA is considerably less. Therefore, two constructs could not maximally describe the relationship amongst the constructs.
2) In PCA, each component is unrelated to all the other components. Therefore, when the first and second component are used as axes, they are perpendicular or independent. With the AMCA method, the arbitrariness of the selection of constructs to serve as components (i.e. not related at .05 level of significance) does not ensure independence and therefore to use them a coordinate axes is misleading.

D. Data Output

The FOCUS program produces a dendogram or tree diagram depicting the relationship between constructs/elements. This image requires a great deal of exploration to understand not only the relationship among the constructs/elements but also the relationship between constructs and elements. Furthermore, this pattern is difficult to compare across clients. PCA, on the other hand provides a map which illustrates the relationship of constructs/elements and constructs with elements. As well patterns are easily compared across clients.

In the case of AMCA, an image is not produced but rather the data to construct one is provided. The printout identifies the constructs to serve as axes and provides the relevant correlation tables to plot the constructs on these axes (elements are not analyzed). The image constructed is designed for interpretation by trained counsellors and consequently is of little value to the client alone. As well, the information is of limited use to the organization in terms of generating comparative information on clients.

VIII OPTIONS

If a microcomputer version of the Repertory Grid is to be used in Canada Employment Centres, two options are available to CEIC in terms of development:

1. the adaptation of an already existing model to meet CEIC requirements; or
2. the development of a new program based upon identified CEIC needs.

If option 1 is followed, it follows that:

(i) modifications will need to be made, at the very least, to the data input procedures, in order to meet the stated requirements of CEIC;

(ii) adoption of the Cluster Analysis techniques for analysing the data will require considerable training of counsellors in its application and interpretation. As well, further analysis will be required to meet organizational needs. In the case of the Microgrid, these problems are more severe. As well, further programming would be required to produce the graph at the end of the program;

(iii) modification of the analysis techniques (i.e. adoption of PCA) would, in effect, be the acceptance of option "b" as the analysis techniques are the key feature in the development of the system.

The adaptation of option 1 would not necessarily be the more economic route. Given the deficiencies in the existing models with respect to the determined requirements for a CEIC version of the Repertory Grid, it is recommended that option 2, the development of a system to meet specific CEIC needs, be explored. As the analysis techniques are the key elements to the system, the following course is being pursued:

1. the identification of available PCA microcomputer programs and/or the identification of the computational procedures for the programming of PCA, around which input and output procedures can be built; and
2. the development of a user requirements document for evaluation of programming costs.

IX. SUMMARY

The purpose of this report is to identify the requirements for a microcomputer version of the Repertory Grid for use in CECs and to examine current models to determine their usefulness to a CEC setting.

The information generated by the Repertory Grid is seen as useful in assisting clients in career decison-making as well in providing CEIC with information regarding the decision-making processes of clients.

The user requirements for CEC clients are examined with both perspectives in mind. These are subsequently compared with two interactive computer models currently available - FOCUS, which is not currently available in the microversion but easily adapted, and the Microgrid, a microcomputer version of the Repertory Grid made freely available to interested individuals by the developer, Dr. Stones.

A comparative analysis of both programs with the requirements for CEIC indicates some problems. This is particularly true in the case of data analysis procedures and output. In the case of FOCUS, where the user is the client, Hierarchical Cluster Analysis techniques are used as it is considered by the authors as easy to follow and understand by the client. The Microgrid, on the other hand, sees the clinician as the user of the information. Consequently the analysis technique, Anchor Method of Cluster Analysis, is slightly more complex and difficult for the client to interpret. As well, it is not any more useful to the organization than the Hierarchical Cluster Analysis.

It is suggested that the analysis found most suitable for satisfying both users (i.e. clients and CEIC) is the Principal Component Analysis.

Futher study is under way to provide information as to the feasibility of producing a microcomputer version of the Repertory Grid Program using PCA analysis.

BIBLIOGRAPHY

Easterby-Smith, M.V.P. "How to use the Repertory Grid HRD, *J. of European Industrial Training*, Monograph, 1980, *2*(2).

Easterby-Smith, M.V.P. "The design analysis and interpretation of repertory grids" in (M.L.G. Shaw, ed.) *Recent Advances in Personal Construct Technology*. *London: Academic Press, 1981*.

Eshragh, F. "Subjective multi-criteria decision making", (M.L.G. Shaw, ed.) *Recent Advances in Personal Construct Technology*. London: Academic Press, 1981.

Honey, D. "The repertory grid in action: how to use it as a pre-post test to validate courses." *Industrial and Commercial Training*, 1979, *11*(a), 358-369.

Hopwood, H. *The Measurement of Career Adaptation: Studies I and II*. Ottawa: Canada Employment and Immigration Commission, 1982.

Reid, W.A. and Holley, B.J. "An application of repertory grid techniques to the study of choice of university". *Br. J. of Educational Psychology*, 1972, *42*(1), 52-59.

Shaw, M.L.G. "Conversational heuristics for electing shared understanding" (M.L.G. Shaw, ed.) *Recent Advances in Personal Construct Technology*, London: Academic Press, *1981*

Shaw, M.L.G. and Thomas, L.F. "FOCUS on education - an interactive, computer system for the development and analysis of the repertory grids", International Journal of Man-Machine Studies, 1978, 10, 139-173.

Shubsachs, A.W.D. "To repeat or not repeat: Are frequently used constructs more important to the subject? A study of the effect of allowing repetition of constructs in a modified Kelly Repertory Grid Test" Br. J. of Medical Psychology, 1975 , 48, 31-37.

Smith, J.M. "Producing job descriptions using Repertory grids", Paper read at workshop on construct theory and repertory grids. British Psychological Society, Division of Occupational Psychology, 1978.

Stewart, V. and Stewart, A. Business Applications of Repertory Grid. London: McGraw - Hill, 1981.

Stones, M.J. The Microgrid: A microcomputer version of the Repgrid", Canadian Psychology, 1982, 23, 102-104.

CAREER PLANNING: VALUES, ROLES, STRATEGIES, TIME, SIGNIFICANT OTHERS

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RANKING YOUR VALUES

You will compare your values and rank them. The grid will help you compare all of your values simultaneously and establish a rank order. Nineteen values have been numbered.

1) Ability utilization - Freedom to use and develop one's talents and skills and to find outlets for one's interests in the things one does.
2) Achievement - Doing something well, the feeling one gets from doing or having done something well.
3) Advancement - Being promoted, gaining upward mobility in terms of one's career.
4) Aesthetics - Adding to and enjoying the beauty of processes, products, and surroundings, both natural and man-made.
5) Altruism - Helping others and being concerned for their welfare.
6) Authority - Influence over others which requires others to follow a point of view or policy, or which leads others to believe that they should accept it.
7) Autonomy - Independence of action within one's sphere.
8) Creativity - Develop or make something original, which may not necessarily be something unique, never before produced or made, but is original for the person concerned.
9) Cultural identity - Freedom to identify with one's primary group or groups without suffering from discrimination.
10) Economics - Stability of economic wellbeing.
11) Life-style - Living according to one's personal preferences.
12) Personal development - Achieving selfactualization.
13) Physical activity - The desire for body movement as found in exercise.
14) Prestige - Gaining of recognition and status for what one does or for one's personal qualities and characteristics.
15) Risk - Taking chances in what one does.
16) Social interaction - Socializing with other people who are friendly.
17) Social relations - Having support systems and significant others in one's life.
18) Variety - Change and diversity in what one does, whether of tasks, processes and methods, the rhythm of activity, location or people with whom one associates.
19) Working conditions -Having good physical conditions in which to work.

RANKING YOUR VALUES

INSTRUCTIONS

Compare Value #1 with #2. Circle the more important value to you. Procede down the column and compare Value #1 with #3. Continue to compare values, circling the more important value in each pair until you are finished. You may want to add more values. Count the number of times a value was circled. Put the totals in the box.

Next, arrange a list according to the number of times an item was circled.

1																			Ability utilization
1/2	2																		Achievement
1/3	2/3	3																	Advancement
1/4	2/4	3/4	4																Aesthetics
1/5	2/5	3/5	4/5	5															Altruism
1/6	2/6	3/6	4/6	5/6	6														Authority
1/7	2/7	3/7	4/7	5/7	6/7	7													Autonomy
1/8	2/8	3/8	4/8	5/8	6/8	7/8	8												Creativity
1/9	2/9	3/9	4/9	5/9	6/9	7/9	8/9	9											Cultural identity
1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	10										Economics
1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11									Life-style
1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12								Personal development
1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13	13							Physical activity
1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14	10/14	11/14	12/14	13/14	14						Prestige
1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	13/15	14/15	15					Risk
1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	13/16	14/16	15/16	16				Social interaction
1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17	10/17	11/17	12/17	13/17	14/17	15/17	16/17	17			Social relations
1/18	2/18	3/18	4/18	5/18	6/18	7/18	8/18	9/18	10/18	11/18	12/18	13/18	14/18	15/18	16/18	17/18	18		Variety
1/19	2/19	3/19	4/19	5/19	6/19	7/19	8/19	9/19	10/19	11/19	12/19	13/19	14/19	15/19	16/19	17/19	18/19	19	Working conditions
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
																			TOTAL
																			RANK

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RANKING YOUR ROLES

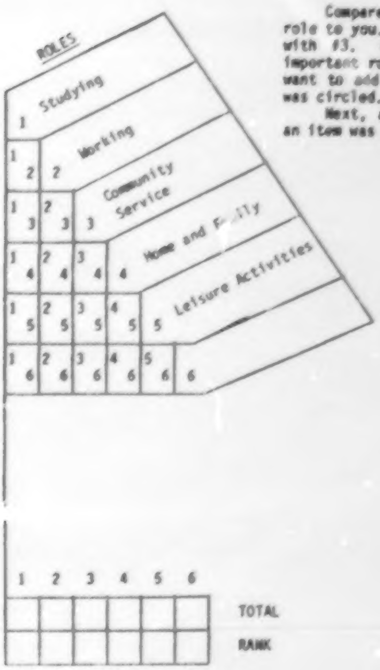
You will compare your roles and rank them. The grid will help you compare your roles simultaneously and establish a rank order. Five roles are to be examined:

1) Studying
2) Working
3) Community Service
4) Home and Family
5) Leisure Activities

INSTRUCTIONS

Compare Role #1 with #2. Circle the more important role to you. Pro- cede down the column, and compare Role #1 with #3. Continue to compare roles, circling the more important role in each pair until you are finished. You may want to add more values. Count the number of times a role was circled. Put the totals in the box.

Next, arrange a list according to the number of times an item was circled.


ROLES
Studying
Working
Community Service
Home and Family
Leisure Activities
1
1 2 2
1 3 2 3 3
1 4 2 4 3 4 4
1 5 2 5 3 5 4 5 5
1 6 2 6 3 6 4 6 5 6 6
1 2 3 4 5 6
TOTAL
RANK

ROLES AND VALUES

You will compare the extent to which each role provides for the satisfaction or expression of our most important values. Your five roles and the five highest rank values will be used in this exercise.

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ROLES AND VALUES

Instructions. Write in the names of your values ranked 1 to 5. Write in the names of the roles according to their rank. Take value 1 and go down the column and rank each role according to the extent to which you realize or express the value in each role. Then do the same for each of the succeeding values. Total the number for each role and then rank the role.

ROLES	VALUES					TOTAL	RANK
	1	2	3	4	5		
1							
2							
3							
4							
5							

If the Roles in the left have different ranks in the extreme right hand column, you must then ask yourself. Why the discrepancy? Is one role most important but less satisfying? Talk it out with a buddy, then go on to the STRATEGIES exercise.

STRATEGIES

You will complete the quiz and score it.

ONE	YES	NO
1. I hope that during the next five years I shall find an opportunity to get the kind of job I shall need to support a family.	____	____
2. As I get older, I shall need to find a job that I can really settle with.	____	____
3. I plan to specialise in a job that really has a future.	____	____
4. I think I know where I am going in my career.	____	____

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5. I shall need to find different rewards from work as I get older. ___ ___

6. My present job will help me to reach my eventual goals. ___ ___

7. I try thinking ahead about the work I might be doing in a few years time. ___ ___

8. I find I am planning ahead more now than when I had just left school. ___ ___

9. You have to plan ahead very carefully now because employment is changing very rapidly. ___ ___

10. I have taken work because I know it would lead to a better job later on. ___ ___

11. I don't intend to be in my present job in six or seven years time. ___ ___

12. You must think ahead and try to plan your career. ___ ___

13. I have never just lived from day-to-day. ___ ___

14. I spend a lot of time thinking about my future work. ___ ___

15. I am planning my career several years ahead. ___ ___

TWO YES NO

1. It is important to learn about the various job opportunities that might be open to you. ___ ___

2. Recently I have been putting a lot of energy into finding out more about the occupations which are open to someone with my level of education. ___ ___

3. When I have wanted to change jobs, I have gone to Manpower to find out what kind of vacancies there were. ___ ___

4. I like to move on from one employer to another, trying out different jobs. ___ ___

5. I try to keep an open mind about different kinds of jobs, I don't want to get stuck in a rut. ___ ___

6. I often read newspapers to look for vacancies. ____ ____

7. I am interested in the work which other people do. ____ ____

8. I am willing to consider a variety of different jobs. ____ ____

9. When you are starting out you should try a broad range of work to find out what you like. ____ ____

10. You can learn a lot about work by reading the relevant books. ____ ____

11. You should always keep your employment options open. ____ ____

12. Right now, I am doing things that will help me to stay in my chosen job. ____ ____

13. I am trying to build up a reputation for myself in my line of work. ____ ____

14. I have now found the work that suits me and I hope to stay in it. ____ ____

15. I am now trying to find out as much as I can about my present job. ____ ____

THREE

YES NO

1. I can look back at my jobs and see a progression. ____ ____

2. Every job that I have done has been a different experience. ____ ____

3. I have learned a great deal from doing my present job. ____ ____

4. Looking back, the different jobs that I have done do seem to make sense to me. ____ ____

5. Even though I have had some bad jobs, I have learned from doing them. ____ ____

6. I am glad that I have done the work which I have - it has taught me a lot. ____ ____

7. Although I couldn't see it at the time, there has been a direction in my career. ____ ____

8. I have come a long way in my career. ____ ____

9. I have found that working has lead me to question a lot of my attitudes. ____ ____

10. There has been a pattern in my work. ____ ____

11. My career has not always gone as I have planned it, but it has been worthwhile. ____ ____

12. The way that I have overcome set-backs at work has made me a stronger person. ____ ____

13. I have grown with my job. ____ ____

14. There have been some important turning points in my career since I left school. ____ ____

15. There have been connections between the different kinds of work that I have done. ____ ____

FOUR YES NO

1. I have made mistakes in my career, but there is no one to blame but myself. ____ ____

2. I do not really believe in luck in finding a job, I think you make your own luck. ____ ____

3. If you want to find work, you have to sell yourself. ____ ____

4. I believe that I could always go out and find myself a job. ____ ____

5. I think that sometimes you have to do things that are solely for yourself. ____ ____

6. I am quite confident of my abilities. ____ ____

7. I feel that I am in control of my career. ____ ____

8. It is up to me to earn promotion rather than wait for it to happen. ____ ____

9. To achieve any goal you have to put in a lot of work yourself. ____ ____

10. I think we have a choice in what we do, things don't just happen. ____ ____

11. If things don't work out for me, I have only myself to blame. ____ ____

12. I am not prepared to have any outside interference in planning my career. ____ ____

13. It is important to make decisions for yourself rather than handing them over to others. ____ ____

14. Sometimes you have to recognize that you have made the wrong decision. ____ ____

15. You can't always blame problems on bad luck. ____ ____

FIVE

YES NO

1. When I have an important decision to make, I try to talk it over with someone I trust. ____ ____

2. I do not trust my instincts in finding a job. ____ ____

3. I like to think through my decisions very carefully. ____ ____

4. No one factor would persuade me to change my job. ____ ____

5. I listen to other people's advice about work, but I make up my own mind. ____ ____

6. I am willing to change my mind if someone can give me a good reason. ____ ____

7. If I were to make a decision which meant changing jobs, I would think about it very carefully. ____ ____

8. I take time over decisions which might affect my career. ____ ____

9. In choosing a job, you must give weight to all the information you have. ____ ____

10. I have never decided to take a job just because it was offered to me. ____ ____

11. In choosing a job it is not enough to just 'feel' that it will suit you. ____ ____

12. I don't think that you must always stick to a decision once you have made it, you can always change your mind. ____ ____

13. I would think first before accepting promotion. ____ ____

14. You can not rush into decisions about work. ____ ____

15. I like to get a number of opinions before I make up my mind. ____ ____

SIX

YES NO

1. In future, less and less people are going to be employed in the manufacturing industries. ____ ____

2. Semi-skilled jobs are getting harder to come by. ____ ____

3. Automation is taking away the need for much manual work. ____ ____

4. As jobs become harder to find, it will become more important to have qualifications. ____ ____

5. The skills required in industry are changing very rapidly at the moment. ____ ____

6. The introduction of micro-processors will affect some jobs more than others. ____ ____

7. I know about the training courses that are open to me. ____ ____

8. I understand the promotion structures at my firm quite well. ____ ____

9. The cost of fuel is having an effect on employment chances. ____ ____

10. I know more about relative rates of pay than do most of my colleagues. ____ ____

11. Developing countries are taking a bigger share of world markets. ____ ____

12. Few countries have as many strikes as Canada. ____ ____

SCORING

Count the number of YESes on each page and enter them in the box.

STRATEGY

	NUMBER OF YESes			NAME OF STRATEGY
ONE				Planfulness or future perspective
TWO				Exploration
THREE				Reflection on Experience
FOUR				Autonomy
FIVE				Decision making
SIX				Information

0 5 10 15

Each of the Strategies may be defined as follows:

1. Planning or Future Perspective: Your orientation to the future, your ability to identify steps to be taken in the future, and to seek opportunities for their implementation. This includes the extent to which you allow for change in your needs, recognize personal development tasks and take into account the changing nature of the opportunity structure.
2. Exploration: Your examination of a variety of occupations, initially considering a wide range and later concentrating on selected occupations in depth, followed by seeking to become established in one of them. This includes your willingness to consider a range of occupations, your efforts to seek a better understanding of particular occupations, and the use of appropriate resources.
3. Reflection on Experience: Your orientation to the past. Your awareness of, and tendency to analyse past experience. This includes your perception of past occupational experience such as being a [illegible]ent career rather than a succession of [illegible] jobs, having learned from previous jobs [illegible]sidering them worthwhile.
4. Autonomy: Your sense of individuality and power over your own life. This includes the extent to which you think you - rather than others - control your life; the responsibility you take for making decisions and carrying out plans, and your acceptance of responsibility for the consequences of your actions.
5. Decision Making: This is your ability to make career decisions wisely. It includes the extent to which you consider all other factors that influence your career and the relationship of these factors

to your needs or objectives. It also includes the extent to which you employ decision making styles appropriate to particular kinds of career decisions.

6. Information: This is your knowledge of the world of work in general and of your own field of employment in particular. It includes possible changes in the labour market, the general availability of blue collar jobs, training and retraining opportunities and entry requirements, benefits, conditions. You can see the relative emphasis that you have given to each strategy. Each should have a score of at least 10. Examine the lowest score first and ask yourself these questions. Why did I score low on this factor? Is this factor holding me back? Does it affect my other roles as well as work? What can I do to improve on it? What will I do? Who can help me? Now talk it over with your partner.

STRATEGIES AND WORK ROLE VALUES

INSTRUCTIONS

Take your most important values that you want satisfied through work roles and write their names in columns one to six. Write "high", "medium" or "low" in column A opposite each strategy in accordance with the ratings in the previous exercise. Put an "X" in the cell for those values that require, in your opinion, an increased level of one or more strategies in order for your satisfaction of your values.

		WORK ROLE VALUES					
STRATEGIES	A	1	2	3	4	5	6
1 Planfulness							
2 Exploration							
3 Reflection							
4 Autonomy							
5 Decision Making							
6 Information							

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Write the name of the Strategy and Value Roles that you wish to improve each on a separate piece of paper "If only I had the Time". On the sheet list all of the activities that you could do if you only had the time to do them. In thinking of activities you might review the questions in the Quiz to see if they prompt additional ideas.

Opposite each idea estimate the power or effect that it would have in helping you achieve your goal. Rate the power high, medium and low. (H,M,L). Then estimate the time required to achieve each. Now rank the items in terms of the best value for time spent.

IF ONLY I HAD THE TIME

Strategy: ____________________

Work-Role Value: ____________________

Imagineable activities to improve the strategy

	Power	Time Required			RANK
		Per day	or week	or month	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

Significant Others

You have listed and evaluated a number of career development activities that you might undertake. Some you can do entirely on your own while others might require the ideas, encouragement and help of other people. In this exercise you will list the significant people in your life and rate their potential helpfulness (plus: +; neutral: 0; and negative: -) to you in carrying through with these activities. In the vertical column list the four main activities in the horizontal boxes and your significant others such as spouse, parents, children, friends (by name), boss, work colleagues, social colleagues etc. then rate their helpfulness.

SIGNIFICANT OTHERS

LIST OF SIGNIFICANT OTHERS	CAREER DEVELOPMENT ACTIVITIES			
	1	2	3	4

THE ANATOMY OF EMPLOYMENT COUNSELLING

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I have called this presentation the anatomy of employment counselling because I intend to describe the component parts of employment counselling. By comparison the physiology of employment counselling is the process by which all of these components work in relation to each other and to the ideas, attitudes and behaviours expressed by the client. One cannot understand the working of the human body without knowing both anatomy and physiology and similarly a presentation on anatomy is only a snapshot rather than a movie.

It is the same with counselling but in this presentation I will limit myself only with the component parts or anatomy of employment counselling. I shall present these components in the sequence that they would normally be first employed in a counselling interview.

With this in mind the first set of components are the attending skills which were well defined by Allen Ivey. Incidentally these have been very well demonstrated in the video tape, Tuning In - Intentional Attending.

There are seven attending skills:

1. Non-verbal cues: posture, eye contact, facial expression, mannerisms, gestures, voice volume, voice tone, voice rate. Non-verbal cues give subtle but clear hints to the client of what the counsellor considers important in the client's comments and behaviour.
2. Minimal encouragers: behaviours requiring little effort by counsellors (such as nodding) but encourage the client to continue in a certain direction.
3. Open questions: allow the client to express him/herself without imposed assumptions of counsellor as done by closed questions which limit client's response to yes/no.
4. Verbal tracking: keep the client on track by using open or closed questions.
5. Paraphrasing: is a summary of content to verify and to assure client of understanding.
6. Mirroring: is a reflection of feeling not content.
7. Summarizing: is an expanded and combined version of paraphrasing and mirroring. These attending skills are used in most of the other component parts of the employment counselling interview.

The second set of parts to any counselling interview are the Relationship Skills which were first described by Carkhuff and which have been well demonstrated in the video - Client Counsellor Relationships and Other Things That Go Bump. These six relationship skills are:

1. Empathy - communication of understanding.
2. Respect - communication of belief that client can change.
3. Genuineness - counsellor's verbal and non-verbal behaviours must be congruent.
4. Self-disclosure - counsellor gives information about him/herself to demonstrate that he/she really understands.
5. Concreteness - counsellor requires client to be specific not vague.
6. Immediacy - counsellor discusses clients reactions at the time they occur.

These relationship skills are also used in almost all parts of employment counselling.

The third set of components are the influencing skills which Allen Ivey has discussed thoroughly in his recent book, *Intentional Interviewing and Counselling*.

These skills include:

Directives - which indicate clearly to a client what action(s) the interviewer wishes the client to take. They assist a client in understanding a task and help to ensure action.

Logical Consequences - which indicate the likely results of a client action, which may be negative or positive. They make clients aware of the impact of their actions and facilitate their making a choice for the future.

Feedback - which provides accurate data on how the counsellor or others view the client. It facilitates self-exploration and self-examination using data on how others view the client.

Interpretation - which provides the client with an alternative frame of reference to view life situations. It facilitates client's ability to reframe life situations and view them from alternative perspectives.

Influencing Summary - which provides the client with a brief summary of what the interviewer has said or thought during a session. It enables the client to pull together, remember, and understand the interviewer's influencing statements.

Information/Advice/Instruction/Opinion/Suggestion - which passes on information and ideas of the interviewer to the client to bring new points of view and information to the client's attention.

Confrontation - which points out incongruity, discrepancies, or mixed messages in behaviour, thoughts, feelings or meanings. It promotes client talk with a view to explanation and/or resolution of discrepancies.

The fourth set of components of employment counselling are the assessment tasks. Client assessment is collaboratively developed goalsetting. That is to say that it assists the client to identify and commit him/herself to a relevant counselling goal or action plan.

The first task of the counsellor is to establish a positive collaborative relationship with the client. To establish and to maintain such a relationship, the counsellor uses the attending and some relationship skills.

Within the second task, the client is asked what his/her concern is (i.e. what has prompted the client to come for an interview) and, thus, arrive at a simple statement of the concern. The concern statement usually takes the form, "I can't...."

In the third task, the client is prompted to elaborate the statement of concern to include the perceived constraint. The constraint statement usually takes the form, "I can't do 'A' because of 'B'. The course of the problem may be seen as internal ("I can't go for an interview because I am too nervous") or external ("No one will hire me because I do not have experience"). This causal statement represents the constraint that the client sees as hindering his/her resolving the employment concern.

The fourth task is to ensure that both client and counsellor agree on the purpose of the interview. The task, therefore, is to explain to the client that the purpose of the interview is to discuss the client's employment concern and to arrive at an agreement as to the employment directed goal towards which the counsellor and the client will work.

The fifth task, the counsellor must prompt the client in self-exploration to ensure that the client is precise in describing the constraint in terms of feelings, beliefs, and facts. The client is encouraged to be precise in describing the constraint - for example, some people will say they "can't" do something when in fact they "won't" even try. This type of expression and thinking must be clarified. An important issue that is brought up is that of precision of statement as to who owns the problem. If the client does not accept some ownership of his/her employability constraints, then there is little of anything that the client and counsellor can do to resolve the concern.

The sixth task, is to assist the client in evaluating his/her strengths and barriers in relation to the expressed employability constraint. The employability dimensions that may be operating within a client's constraint may be categorized into seven types:

- Motivation/Attitudinal
- Emotional
- Information
- Socio Economic
- Physical

- Education/Skill
- Other

Through appropriate questioning, feedback, and confrontation by the counsellor, the client can explore any of these dimensions that might contribute to the constraint.

Involved in the seventh task, is the further exploration of the constraint by:

a) identifying and describing the underlying value or assumption within the constraint statement. This enables the client to move to the formulation of more concrete, more action-oriented, and more internally-oriented consideration of alternatives for change;
b) assisting the client to judge such value or assumption as constructive or selfdefeating; and
c) assisting the client in formulating and in committing him/herself to a more productive value or assumption when the identified value or assumption has been judged to be self-defeating. The counsellor may take on more of a teaching role in ensuring that alternative assumptions are generated and that the client is assisted in replacing self-defeating values or assumptions with more productive ones.

In the eighth task, the counsellor assists the client in formulating a contingency statement in the form of "If I am to do 'A', then I must do 'B'." For example, a client who previously said that he/she could not go for an employment interview because he/she was too nervous at such interviews, might now say if he/she is to go to such interviews he/she must control specified nervous symptoms.

In the ninth task, the counsellor assists the client in clarifying the contingency statement as being realistic, responsible, and reflecting a stated action to which the client is committed.The contingency statement formulated in task eight is now validated through its relationship to the reality of the client's strengths and barriers to employment, including the client's work motivation, values and expectations. It is important that the contingency statement be realistic, relevant, and action-oriented. It is in task nine that the client moves more directly to a course of action to help him/herself become more employable and to get a job.

The tenth and final task is to assist the client in translating the selected contingency statement into a mutually agreed upon counselling goal or action plan on which the client is committed to work.

The assessment interview is followed by the counselling interview (the fifth component) which has six tasks:

1. Determine Target
2. Select and Implement Strategy

3. Evaluate Client Performance
4. Terminate Counselling
5. Close Case
6. Counsellor Self-Evaluation

Determine Target

The targets counsellors generate with clients are specific, observable, measurable, and involve standards as well as conditions. For example, a target would be phrased: To learn constructive response to criticism from work supervisors so well that an observer reports that I have made no hostile responses during a two-week period.

Individual Counselling begins with Determining of Employment Target, a task designed to establish specific targets as the necessary base for effective movement towards employment. This is one of the more complex action steps and is further broken down into a series of sub-steps:

STEP 1. Establish the goals of employment with the client by
  a) determining client understanding and/or acceptance of goal-setting
  b) dealing with client resistances
  c) helping client convert concern to goal

STEP 2. Establish the targets which when added together lead to the employment goal (i.e. learn how to complete an application form correctly, learn how to explain your qualifications in an employment interview) Establish targets by:
  a) stressing importance of client participation in specifying target
  b) determining specifics: behaviour, standards, conditions
  c) summarizing target statement
  d) obtaining verification of client acceptance of target statement

STEP 3. Ascertain the commitment of the client to the process by
  a) assessing degree of client commitment
  b) exploring source of reluctance (if any)
  c) discussing cost and effort factors with client
  d) avoiding biasing client's decision

STEP 4. Formulate an agreement with client on what you and he/she will do jointly and separately Formulate an agreement by
  a) outlining intent
  b) agreeing upon responsibilities
  c) determining recording format
  d) summarizing content
  e) reviewing with client
  f) verifying client acceptance

Each step has a checkpoint which enables employment counsellors to pause momentarily to review their coverage of the target identification process and to recycle to any areas that have been covered inadequately.

The second task is to select and implement a counselling strategy. There are six specific strategies intended to impact on the majority of employment concerns presented to counsellors. They are:

- Sequential Learning Strategy which is simply teaching a client a series of increasingly difficult skills. An example of this is:
  A woman is very nervous because she will have to face a Selection Board of three members.
  She will, with the counsellor establish a series of situations to face in order to achieve the goal of facing the Board with a low anxiety lead.

These steps can be:

1. The husband will ask her 10 questions
2. The husband and one friend will ask her 10 questions
3. The husband and two friends will ask her 10 questions
4. Three friends will ask her 10 questions
5. Three strangers will ask her 10 questions
6. The Board

It can be used to increase something or to decrease something.

Information Strategy. Not everyone would agree that providing information is counselling, yet a considerable amount of information often needs to be passed on in the course of employment counselling. This may be labour market information (information on employers, jobs, salaries, working conditions); it may be information on services that are available.

Occupational Goal Setting. Many clients need help in formulating an appropriate occupational goal. This strategy may be carried out with the help of psychological tests, occupational monographs, career planning courses, computer systems etc. - many of which are described in Employment Counselling Materials.

Learning Strategies comprise four principal techniques:

- modelling by the counsellor of certain desirable thoughts and behaviours and the identification of others who the client can also initiate;
- rehearsal in which the client practises the new behaviours and thoughts;
- prompt/fade Sometimes a client does not get the clues from others when he or she should alter his or her behaviour. The prompt/fade approach teaches greater awareness of the cues that others provide.

- feedback - teach client how to critique own performance, how to reinforce the positives following performance, and how to monitor one's own behaviour.

Decision-Making Strategy For many clients requiring employment counselling, their difficulties stem from not being able to choose among the options available and perceive themselves as having limited if any options. The decision-making strategy comprises eight steps:

1. explain the decision-making process
2. determine if temporary action is necessary
3. implement temporary action
4. generate alternatives
5. determine appropriateness of alternatives
6. examine costs and benefits of remaining alternatives
7. make tentative choice
8. complete decision process.

Self-Management Strategy Self-management is the appropriate and effective utilization of problem-solving behaviours in running one's life. A major feature of this strategy is to teach clients to monitor their own behaviour, to alter their behaviour responses, to use self rewards to change negative self-thoughts.

Within each strategy there are certain steps to be performed:

- explain the strategy to the client
- adjust the strategy to client's needs
- contract for strategy completion
- perform the steps

Ongoing evaluation is an integral part to contracting, targeting, recycling, feedback and checkpoint. In addition, evaluation as a task covers Evaluation of Client Performance, Terminating and Monitoring Counselling, and Counsellor Self-Evaluation. This task is designed to build in counsellor accountability for the results of counselling by providing a specific time in counselling where the client progress made through application of a strategy or combination of strategies is compared with the original goal or target established as necessary for movement toward employment or actual employment.

In summary, the body of employment counselling includes the following identifiable parts:

- 7 attending skills
- 6 relationship skills
- 7 influencing skills
- 10 assessment tasks
- 6 counselling tasks
- 6 counselling strategies.

These 42 components do not represent a complete listing but are the ones to date which comprise individual employment counselling as it is being developed by the Canada Employment and Immigration Commission.

VOCATIONAL REHABILITATION COUNSELLING SERVICES IN THE ONTARIO WORKERS' COMPENSATION ENVIRONMENT

Arthur J. Darnbrough
Executive Director
Vocational Rehabilitation Division, Workers' Compensation Board

My colleagues and I in the Vocational Rehabilitation Division of the Workers' Compensation Board of Ontario, have found past national consultations to be of significant help.

The exchange of ideas between people from the different disciplines represented at these consultations has been most useful to us in assessing and improving our vocational rehabilitation services.

We are pleased this year to make a direct contribution.

Because, after all, we share a common purpose - namely, helping people realize their potential as individuals and helping them achieve financial and social independence through employment.

In many cases, we also share common counselling goals - we must determine each individual's interests, aptitudes, and abilities; we must set employment objectives; and we must help our clients find jobs.

However, our job differs essentially from that of many people in this room because every person we deal with faces the complication of a physical or psychological impairment.

In addition, our clients come from all walks of life with a wide range of social and cultural backgrounds; the language with which they feel most comfortable may not be English or French; there is a good possibility that they may be disadvantaged with regard to education or job skills; and, of course, they all face residual effects of the injury itself.

As a result, we must explore every avenue of rehabilitation if we are to effect a complete and satisfactory re-integration of the worker into the work force and the community.

As you are no doubt aware, successful rehabilitation programs call for considerable expenditures of money - indeed, in the past two years, the Workers' Compensation Board has put approximately $60 million towards the vocational rehabilitation of injured workers.

Further, there is no question that the cost of rehabilitation programs is greatly outweighed by the gains to be derived from them.

First, there is the obvious social benefit of returning people, who for the period of their recovery are unproductive, to full and active participation in their workplaces.

Second, consider the hundreds of millions of dollars that are spent on compensation - in fact, the cost of compensating workers across Canada for injuries on the job approaches the $3 billion mark each year - in Ontario alone, approximately $1 billion a year is expended in compensating injured workers.

In its recent submission to the Macdonald Commission which is studying Canada's Economic Prospects, Labour Canada states, and I quote, "Time not worked due to industrial accidents and illnesses is more than double that due to work stoppages" end of quote.

Obviously, rehabilitation programs which return injured workers to the work force as quickly as possible can greatly reduce Canada's compensation bill by reducing the amount of time people spend drawing compensation benefits.

And I am sure Canadian industry and Canadians generally would be happy to put that money to other uses.

To understand fully the role of the Ontario Board's Vocational Rehabilitation Division, it is necessary to know something of Ontario's compensation system as a whole - its mandate and what benefits and services it offers.

Therefore I would like to give you an overview of Ontario's System of Workers' Compensation - I should mention that workers' compensation in this province is similar to programs in other provinces and territories - while there may be subtle differences in application, the general philosophy and functions are comparable.

I will then go on to look at the general principles and precepts which guide the Board's Vocational Rehabilitation Program.

Turning, then, to the Ontario Board as a whole:

the task of providing an equitable and fair compensation system to Ontario's employers and workers is, to understate the case, a large one.

Consider that nearly four million of the province's 4.6 million - person labour force come under the protection of the Workers' Compensation Act; that the Board works with more than 160,000 employers in the province in funding the system; that at any one time, the Board is dealing with approximately 125,000 injured workers, of whom 80,000 are on permanent pensions and 45,000 on temporary disability.

In fact, in 1982, the Board handled close to 350,000 claims.

The Board's mandate for this work is spelled out in the Workers' Compensation Act which became law in 1915.

The Ontario Legislature has amended that Act more than 50 times in order to improve and extend its benefits, and to keep its provisions in line with changing social and economic developments.

Most recently, Ontario witnessed considerable discussion over proposals to amend the Act.

This discussion culminated last December in a report by a legislative standing committee which is now being considered by the legislature and will undoubtedly result in a significant redrafting of the Act.

However, the original Act was based on four principles which certainly will not be altered by the new amendments.

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These principles are:

One - No-fault compensation;
Two - The security of benefits;
Three - The administration of compensation by an independent agency, with no recourse to the courts; and
Four - Collective liability for employers.

These four principles remain the cornerstone of our approach to workers' compensation today, and they provide a convenient framework for discussing the different aspects of our work at the Board.

First, the principle of no-fault compensation:

the Workers' Compensation Act recognizes that compensation should be available regardless of whether or not negligence contributed to the accident.

The second principle is security of benefits.

This means, primarily, that the injured worker is assured that the funds required to pay for benefits and services provided by the Act will be available as long as his or her disability lasts.

There are a number of such benefits and services provided to injured workers.

We provide income replacement benefits to workers who have been disabled from earning full wages.

These income replacement benefits currently amount to 75 per cent of the worker's pre-accident gross earnings, up to a maximum of $367 per week, or $1,593 a month, non-taxable.

We pay medical aid for injured workers, as it relates to the compensable injury or disease.

This means we pay the bills for all medical services including necessary treatment by physicians, surgeons, other medical specialists, chiropractors, physiotherapists, hospitals, and for special rehabilitation aids.

And we provide both medical and vocational rehabilitation services including a 522-bed hospital and Rehabilitation Centre in Downsview, in metropolitan Toronto - the Centre provides treatment and assessment services for some 11,000 injured workers each year.

This brings me to the third cornerstone - namely, that the Act is administered by an independent agency - the Workers' Compensation Board - and that in return for all of the benefits I have just mentioned, workers forfeit the right to launch a civil suit.

This has relieved both employers and workers from having to engage in the kind of costly and time-consuming court battles that would otherwise take place had the legislation not been enacted.

Imagine the added burden on the judicial system, and the tremendous litigation costs incurred, if it were left to the courts to resolve 350,000 claims each year.

The Workers' Compensation Board is entirely responsible for administering the compensation system; however, there is a mechanism that allows for any disputed decision to be carefully re-examined.

Anyone whose interests are affected by any decision made by the Board - whether worker or employer - may appeal that decision through an appeals system which is independent of our operating divisions.

I would like to turn now to a brief consideration of the fourth principle, namely, collective liability for employers.

Under this principle, the compensation scheme is financed entirely by assessments on employers, and costs are spread over Ontario industry at large.

The majority of the Province's employers - about 160,000 - are included in schedule one and contribute to the accident fund through their annual assessments; thus they benefit from the collective liability principle.

Employers in schedule two - a small group of about 460, including such public enterprises as the provincial and municipal governments, certain transportation and communications companies, and crown corporations - are individually liable for their own employee's accident costs.

They do not benefit from collective liability.

As you can see from this brief description of how the Board is financed, our compensation system is distinguished from public programs for income maintenance, such as social welfare and unemployment insurance, in that our revenues are drawn entirely from assessments on employers, and not from the general tax base.

These, then, are the four cornerstones of our compensation system - no-fault compensation, the security of benefits, the administration of compensation by an independent agency, and collective liability for employers.

As I mentioned earlier, the Board handled close to 350,000 new claims in 1982.

About 60 per cent of these involved accidents which necessitated medical treatment, but no time off work beyond the day of the accident; 40 per cent, or close to 150,000 did involve time off work and the payment of income replacement benefits to workers.

Most of the workers in this latter group were able to return to their jobs following treatment and a period of recovery.

However, among those who were unable to return to their jobs, close to 7,700 required assistance in returning to employment.

I would like to turn my attention, therefore, from the overall picture of the Board's operations to the role the Vocational Rehabilitation Division plays in helping workers adjust to their injuries and return to the work force as quickly as possible.

To better understand how we do this, it might be useful for me first to describe a few of the fundamental principles upon which our counsellors and specialists work with injured workers.

The first principle needs little explanation - injured workers should be returned to employment.

We believe, in addition, that the successful rehabilitation of injured working men and women depends primarily on their full participation in the program - a rehabilitation program can't be imposed, it must be willingly undertaken by the disabled person.

This co-operation is essential if the worker is to feel a sense of commitment to the process, and only through this commitment will there be the potential for positive results.

To this end, our counsellors at every opportunity encourage injured workers to co-operate fully with all the treatment and rehabilitation personnel placed at their disposal.

Our counselling takes an action and direction orientation as early in the rehabilitation process as possible - occupational goals and objectives are identified, tasks are assigned to the worker and the counsellor, and results are expected.

Further, we believe that the focus of the rehabilitation process must be on what the injured worker can do rather than on any limitations which may be the result of the worker's injury or disease - that is, on ability, not on disability.

We are convinced as well that the rehabilitation process requires a number of different skills and talents from a varied group of professionals, and they must act cooperatively and in consultation with each other to effectively discharge their responsibilities to the injured person.

In this regard, our counsellors are as much catalysts and coordinators as they are specific case managers.

Finally, we carefully consider the needs of the whole person - we determine a unique course of rehabilitation for each worker based on his or her history, abilities, needs, and aspirations.

We believe strongly that by applying these principles to our rehabilitation efforts we can not only assist injured workers in returning to employment, but also help them maintain, or recapture, their dignity and self-respect.

Now to the practical application of these principles in our day-to-day vocational rehabilitation work:

Once an injured worker's eligibility is established, he or she may take advantage of the wide variety of vocational rehabilitation services and resources provided by our Board - these include: counselling, assessment or evaluation, training, and employment services.

Counselling in a workers' compensation environment means having our trained vocational rehabilitation counsellors and specialists help guide the injured worker through the transitional period from accident to re-employment.

Needless to say, this transition is not always smooth - injured workers may well have been very content with their pre-injury work environment and the security it provided their family; an accident can be devastating both to this long-established relationship with their employer and to their plans for the future.

Our counsellors may need to work hard with the client to help him or her overcome fears and concerns about the injury itself before actively pursuing a vocational goal.

This process is directed at helping the person progress through the stages commonly associated with adjustment to personal injury - namely, shock, anger, depression and acceptance.

Counselling might also take the form of assisting the injured worker with financial problems and in helping the injured worker's family cope with the problems posed by the new situation.

Second, the Board's Evaluation or Assessment Services include aspects of vocational counselling with which you are undoubtedly familiar - namely, physical appraisals, personality and vocational aptitude testing, simulated work tests in an industrial setting, and situational assessments in rehabilitation centres.

As I mentioned earlier, some of this activity is carried out at our hospital and rehabilitation centre in Toronto.

Third, some injured workers may require an on-the-job training program, or some form of special skills training, or academic upgrading perhaps at a community college or university - funds are available from the Board for these courses.

Finally, as the ultimate goal of the Vocational Rehabilitation Division is to return injured workers to gainful employment, we expend considerable effort in job-finding and job-placement activities.

To supplement the work of our vocational counsellors, the Board retains experienced placement and employment specialists to find job opportunities with employers across the province that will lead to full-time employment for our clients.

A variety of means are used to help workers find jobs.

We maintain regular, face-to-face contact with employers in the province and, during employment blitzes, we actually conduct door-to-door searchers in designated areas for job opportunities.

We also carry out job demand and work-site analyses - including accessibility studies - in order to help employers determine which jobs might be suitable for people with disabilities.

Our counsellors aid injured workers in their job search using a computerized job opportunity bank which helps us quickly match rehabilitated workers with available jobs suited to their abilities.

All these initiatives in job-finding and job-placement are backed by media advertising campaigns similar to our Back a Comeback Program which some of you may be aware of.

We draw additional support for our job search efforts from organized labour.

Through contract negotiations with employers, organized labour can, among other things, influence hiring practices, encourage the establishment of programs for disabled workers, and promote the provision of employment opportunities for them as well.

In this regard, I am happy to say that our on-job-training program has the full support of the Ontario Federation of Labour, and we are in the process of seeking similar support from local labour councils and local unions across the province.

These then are the four main services and resources provided by the Board for the vocational rehabilitation of injured workers - counselling, evaluation, training and assistance in finding a job.

Before closing, I think it is fitting during what the United Nations has declared the Decade of Disabled Persons, that I take a few moments to address some of the issues which in the future will require the attention of everyone involved in the field of rehabilitation.

As I look to the future, I see a particular need for greater cooperation among rehabilitation professionals, organized labour, government agencies, and employers.

I say this because we will be addressing problems in the future which will not be solved through unilateral action by any one group of professionals, any single sector of employers, or a specific government ministry.

Indeed, in the report to the Ontario Ministry of Labour of the Task Force on Employers and Disabled Persons, Chairperson Jean Pigott stressed this very point, particularly as it affects job search efforts for disabled adults.

As I see it, together we will need to pay greater attention to a variety of important issues with respect to rehabilitation.

These issues are:

1. Expanding efforts to adapt workplaces and individual jobs to the needs of people who have disabilities;
2. Assessing the impact on employment trends of technological advances - for example, exploring opportunities for employing people with disabilities in the microcomputer field;
3. Encouraging the establishment of new short-term skills training centres;
4. Lending support to research into new vocational evaluation techniques, and
5. Encouraging greater employer and union participation in the rehabilitation process so that we can overcome economic and social prejudices.

If we are to successfully address these issues, we will need the co-operation of everyone who is concerned about the satisfactory re-integration of the handicapped into the work force.

In closing, let me repeat that I believe national consultations such as this - which offer considerable opportunity for the exchange of ideas - are an important first step in forging that co-operation.

VOCATIONAL COUNSELLING IN THE COMMUNITY

Denis Cooney
Associates Consulting
Ottawa

I am interested in sharing my perceptions in the hope that others will develop their own alternatives for helping adults re-establish themselves in their chosen community.

I would like to take a few minutes to present my own personal terms of reference. Put yourself on the street with your clients, take away your pay cheque, take away a position with a school board, government agency, or a community-sponsored program. Set for yourself an objective; an objective to earn a living by using your skills to help others secure employment or improve their performance on the job. Very quickly you learn to use the job search skills your are teaching and, in my mind, more important is the fact that you learn what works and does not work. Experience has taught me that you will survive and eventually do well in your chosen role or face the dollar and cents reality that this is not for you. I am sure, at this point, you will be pleased to know that the individuals who do well do so because they are able to market themselves effectively by presenting themselves as products which clients and their sponsors are able to identify.

To the independent community-based vocational counsellor, this means you are marketing yourself to organizations that can pay your invoice. Primarily, you are working for the business community in your region. A natural question is "who will contract your services?" From Diagram A, you can see that I have divided the Ottawa-Carleton region (my community) into two sectors of two groups. The only group that may be somewhat confusing is Group B (Neo-Government). By Neo-Government, I am referring to any organization with a complex decision-making process similar to that of a bureaucracy (Amitai Etzioni, Modern Organization, 1964). Included in this category are crown corporations, government agencies, hospitals, universities, and large associations. Though arbitrarily made, these divisions are useful to me for understanding the career structure of my chosen community.

These are the buyers, exactly what will they purchase from a school guidance counsellor now working with adults in the community. I will not attempt to define each product or service which you may be able to offer. I will list a few of the services offered by firms and individuals:

(a) re-employment counselling;
(b) employment assistance counselling;
(c) transfer counselling;
(d) crisis counselling;
(e) personal career counselling for executives;

DIAGRAM 'A'
COMMUNITY CAREER STRUCTURE

OTTAWA CARLETON REGION

PUBLIC SECTOR		PRIVATE SECTOR	
A	B	C	D
Federal Provincial Regional Municipal	Corporations Agencies	Advanced Technology Manufacturing Services	Service Industry
*Low Turnover	*Average Turnover	*High Turnover	*Above Average Turnover
Contracts Temporary Consulting Specific Skills Hiring Freeze	Independent hiring Financial Marketing Public Relations Administrative Clerical Specific Skills	Major Cutbacks Project Work Fast Pace Tough Competition Dependent on Goverment Contracts	Building Thrust Recreation Accommodation Food Beverage Strong Retail Conferences Very Competitive Manpower Heavy
Government	Neo-Government	Hi-Tech	Services

(f) organization counselling;
(g) two career counselling;
(h) human relations training;
(i) career management training;
(j) selection and recruitment training;
(k) retirement planning;
(l) manpower planning;
(m) attitude surveys;
(n) manpower audits; and,
(o) preparation of job descriptions.

Together we may be able to think of a few more applications of counselling skills or you on your own may be able to create a list based on a career structure analysis of your community.

To facilitate the client's ability to identify your products (skills), I believe it is best to restrict yourself to a maximum of 4 specific areas of expertise. Personally, I present 3 services to clients in a brief but descriptive brochure. By limiting your span of expertise you are not spreading yourself too thin. You are limiting yourself to what you know you can do well. This small win strategy will build success and allow you the flexibility you want later in your career as a community based vocational counsellor.

Personally, I have found training to be an excellent method to 'getting your foot in the door'. Once a relationship is established the organization is usually willing to discuss the use of your services in other areas. But always keep your focus tight, do not try and do too many things - you won't.

Clients are adults who use our services. Client sponsors are usually employers who contract you to help their employees. Both clients and their sponsors have needs and objectives which are, in most situations, different. However, both sets of needs are important and as such must be satisfied if the assignment is to be completed successfully. To accomplish this, I offer three suggestions:

1. Be patient. Give them a chance to get to know you.
2. Learn about your client's organization.
3. Communicate your understandings and be prepared to change your perceptions.

Remember, you want to help work on their problems not create new ones.

The counselling role you assume, the products you offer and the results you achieve combine together to equal your ability to market yourself to clients and their sponsors.

At this time, the majority of work available to vocational counsellors is in individual re-employment counselling. I will talk, at some length on this key service since it describes a service you can provide in the community. I will cover the following aspects of re-employment counselling:

(a) post-separation syndrome;
(b) integrating career decision-making with job search;
(c) networking; and
(d) group job search.

THE POST SEPARATION SYNDROME

I call the process that an adult goes through upon dismissal *Post-separation syndrome* because on an individual basis it *is not grief* but something entirely different. Remember, as an independent, we are being hired to handle individuals since most large scale layoffs are being provided in a less expense manner by the two levels of government. Consequently, an employer is purchasing our services to make sure that the employee is well looked after by the counsellor after termination. So what happens? I see an individual upon notice of release from his/her job going through four distinct and different experiences. These are *retrenchment*, *panic*, *confrontation* and *re-establishment*.

During the stage that I called *retrenchment* the individual who has been notified that their services are no longer required by the organization avoids the issue. The topic of conversation becomes an embarrassment. They accept the information that they are fired but there is no context around which they can assimilate, integrate or even use this information. It is bigger than life. There are no rituals to guide their steps to help them get the experience over without losing face. There are no real euphemism to disguise the hard reality of the situation. In other words, talking about being dismissed forces them to see layoff, termination and relocation for what it is: no income, no vacation, no dental plan, no insurance plan and for many people this may be their only life insurance plan, no retirement fund and no more building towards a retirement fund, in total: insecurity.

In my mind, the difference between these aspects of dismissal and grieving is that grieving wipes out a sense of personal past while job loss wipes out a sense of personal future which, unlike death of a close one, can be re-established.

From a self-concept perspective, I see people joining the work force with a fully developed self-concept. In 1749, Adam Smith in the 'Wealth of Nations' during his discourse on making pins explained that workers develop an identity by their work. This says to me that Smith saw people forming a self-concept as a result of their labor. Through my practice, which has included both personnel selection and dismissal, I have formed the opinion that individuals bring a fully developed personality to the work place. Consequently, a fired employee, in my mind, does not feel alienated from his labor but feels a desire to further explore the feasibility of integrating his or her values and work styles with the employers culture and environment. I do not see fired employees experiencing an identity loss or crisis but rather a social loss because not working in a working milieu is deviant behavior which can not be fully accepted or understood. Rather than feeling alienated the fired employee feels ostracized, left out no longer a part of something. And this being ostracized while wanting to become part of something is why I call this first stage retrenchment.

The individual wants to get back to his or her desk, get back into the work place, to start doing their working task because maybe the experience will go away. They want to rejoin, they want to be re-entrenched, they don't want to be fired. This desire to become part of something again to no longer be ostracized, but to be a working employee in a working environment leads in my mind to the second step of the post separation syndrome panic.

Once the former employee decides that the change in their condition is permanent, that is, they are going to be fired; they want to get the experience over with as quickly as possible. Panic sets in, the individual jumps from avoidance of the issue through retrenchment to action. In a display of nervous energy the individual is unfocused, with the result that action is scattered, defuse, redundant, and often useless which exacerbates the situation. Their primary need is to get the situation over with as quickly as possible.

During the panic stage offers to help result in immediate delegation of tasks to the counsellor by the client. The client says: write this résumé for me, fill out this form, call this person, where is the city map. A dismissed employee frequently says things like:

you were hired to help;
it's not my job it's your job to help me;
you're an expert;
you tell me what to do;
you're not helping me;
I'm not sure that's what I want;
it's too late to change; and
I'm going to continue what I am doing.

During panic, the counsellor has to do three things: slow the individual down, tell the individual that he or she has to do it all himself but with training and counselling, and show the individual how they can conduct a highly focused job search to achieve results.

To help reduce panic feelings and provide structure to the job search, it is useful to use psychological testing, aptitude testing and to give feedback to the individual. They were not ready for it during retrenchment when they wanted to work to avoid outplacement. Now, as a means to slow them down and to show them what and how they can do things, testing feedback becomes very valuable. Reading books on job search can be very helpful to the client. Helping the individual to structure a game plan or a strategy based on achieving small objectives becomes a key issue. Another activity is to list the risk taking in terms of personal marketing that is keeping the individual from approaching potential employers and marketing his/her skills to that employer.

When the counsellor refuses to be delegated too and encourages work for results and objectives; when he/she consciously points out to the individual their panic responses and how these are not helping their job search the third level of the post separation syndrome is reached very quickly confrontation.

During confrontation, the counsellor refuses to be delegated to, and encourages the individual to work for themselves. In exchange, counsellors receive comments back from the client such as: you are keeping me back, you are forcing me to start over, you should have told me this sooner. Outside of the counselling situation the individual sees a lawyer to sue the company. He is hitting at the issues of security and ostracism in order to gain retribution for what the company did to him or her.

By working together throughout the process of panic and confrontation the counsellor leads the individual to re-establishment. Re-establishment means that the individual will develop rational action plan for conducting a job search, maintaining their financial base and for self-improvement. Re-establishment means that the individual will engage in effective personal marketing of themselves to potential employers. The individual will begin to develop a positive attitude towards himself and others. The individual will develop rationalizations to explain why he or she is no longer employed and learn to use social interaction as a means for obtaining leads for employment. Having experience these stages with a variety of dismissed employees, I believe the following recommendations will minimize the consequence of dismissal by allowing the employee to leave his or her place of employment with a sense of dignity and self-respect.

First, I think financial planning is most important. Financial planning with qualified people who can help the employee facing dismissal account for benefit loss, income loss, and project the most realistic time that he or she can afford to be unemployed. Financial planning should include the spouse or the significant other of the employee being dismissed even if this income is not considered to be the primary income. Income has no gender and the loss of benefits and income requires planning.

Second, through legal education the company can go a long way to reducing the number of wrongful dismissal cases. By providing a seminar to employees facing dismissal on the realities of legal fees, the length of settlement time, the cost of severance and the plus and minus of legal options the employee can assess the value of retaining a lawyer to fight a dismissal. As with financial planning, legal education should include the spouse since many decisions are not made by one individual alone.

The primary issue here in terms of legal education is security. The legal route does not supply security in the short term. Further, the individual is genuinely confused with respect to what lawyers can and cannot do to help them understand the consequences of a dismissal.

Finally, counselling with a vocational or career counsellor who understands the career decision-making process and the job search process will go a long way to reducing the length of time it takes an individual to secure employment.

Integrating Career-Decisions with Job Search

Adults make career decisions based on their understanding of the contingencies and constraints within themselves and imposed on them by society. Two sets of understanding (individual and social) are intimately connected by the individual himself. Together, these perceptions construct the data for the adults career decision-making.

Psychology has given us methods for understanding an individual's strengths, as well as, sophisticated techniques for relating attitude and capability to career direction.

The constraints and contingencies imposed on the individual by society are more elusive and ephemeral. Although harder to get a hold of, these are, in my mind, more real in terms of understanding the parameters in which the individual is exercising choice. I premise this thought on the following underlying assumptions:

A career decision-making process is concluded by adults resolving to expand from a personal recognition of competences with specific generic skills to generating a social recognition of their competences with these same generic skills. The question becomes: "if I am a painter than how do I convince others that I am a painter?" To answer this question my clients engage in a social exchange to understand the specific application (jobs) of these generic skills while simultaneously creating opportunities for trading skills for compensation (employment).

By resolving to expand from their own immediate recognition of their skills to a public recognition and acceptance of these skills their activity focuses on personally marketing their skills to potential employers. Counselling, then, becomes the first of many social exchanges during which the adult learns to understand and accept his or her skills, explore the various applications of these skills, and acquire the ability to personally market their skills to potential employers.

"I cannot convince others that I am a painter because I don't know how?" becomes the social constraint of the individual. "If I know how to convince others that I can be hired as a painter", becomes the social contingency statement. The social actions that result from this contingency are the following:

(A) ACTING AS A PAINTER:
  (1) by using jargon the language of painting;
  (2) by wearing clothing that painters wear;
  (3) handling the tools and equipment of painting properly.

(B) HAVING ANOTHER PERSON SAY I AM A PAINTER:
  (1) this would be a reference, somebody I worked for;
  (2) a certificate that says I qualify as a painter;
  (3) a referral from an individual that says I can be trusted to say that what I am is true.

(C) DESCRIBE RECENT PAINTINGS THAT I HAVE DONE:
  (1) this can be a résumé or application form;
  (2) a telephone game plan;
  (3) letters to potential employers that state what I have done as a painter.

(D) TALKING TO PEOPLE WHO USE PAINTERS OR UNDERSTAND PAINTERS IN INDUSTRY.

All of these say to me that there is a method, a process, a ritual, a rite of passage to be followed that builds confidence with potential employers and when the ritual is not followed doubts enter the potential employers decision-making process. For me, it is not enough for the vocational counsellor to help only with the decision-making process. The counsellor must initiate the adult into the rituals that will help with his or her personal marketing effort.

This brings me to my own personal operating definition of counselling in the community; I call it CBO counselling by objectives. Counselling by objectives builds a relationship that helps an individual use his or her understanding of conflicting pressures to explore alternatives, make decisions, set objectives and initiate action to achieve these objectives.

If we look at counselling objectives as identifying jobs and employment opportunities through social exchange (marketing generic skills) two considerations pop-out at me:
  (a) the counsellor must teach networking as a method; and
  (b) must provide a job search opportunity for the client.

NETWORKING

Networking is a set of skills. To be effective, networking must have a focus person, a focus point, and a focus place.

A focus person

The unemployed adult should target people that have been identified as being able to help. They can be a specific individual; hold a position in a company; a level of responsibility; or have an appreciation for the skills one is marketing. The objective is to help the focus person recommend the unemployed adult to another person.

One of the techniques we use to identify focus people for networking is to identify types of people through the Strong-Campbell Interest Inventory who have most in common with the client. These are people who for some reason or other have interests similar to those of the client. Our assumption is that mutual interests will make it less difficult for the unemployed adult to begin a networking process with these people even if their occupation is not of interest to the unemployed adult.

A focus point

The unemployed adult should be able to state what it is they are seeking when they approach another person. They should be able to say what they can offer. This can be done effectively by formulating a simple concise request and a clear statement of contribution.

A focus place

This is a place where the unemployed adult can be made available to potential employers and which facilitates communications.

Networking Process

At the next level, networking is a reciprocal process. It is a pay back system of goodwill. Networking is an informal process that bypasses formal channels of communications. There are no log books just names and contact places. Networking is a social exchange which requires the use of social skills, for example, empathic listening skills. Networking is a trust and confidence building process which dissolves with any violation of established ground rules. Finally, networking is a linking process through which the counsellor can link the client to individuals who are willing to help.

Networking is effective for helping the unemployed adult understand a specific application of generic skills (jobs) and for creating opportunities for trading these skills for compensation (employment). Through networking the individual extends personal skill recognition to social testing of this skill recognition which gives the adult a context for decision-making. That is, they find out who is hiring, who is not hiring, and what skills are in demand.

Group Job Search

Three years ago I began an experience designed to help adults help each other secure employment through group networking.

These groups taught job search skills, provided career counselling, taught networking skills and facilitated the group dynamic so that the participants networked for each other. In other words, they reduced internal competition and created a win-win situation by sharing leads. Whenever I have an opportunity, I advocate the use of this technique which in my case I called Career Forum. However, I strongly believe that the formation of job search group should be done when group counselling can make a significant contribution and when the probability of success is quite high. I make this caution because group job search is not therapy but rather a team building process focused on specific tangible and relevant objectives. It is a tough process and not suitable for everyone who is seeking employment.

One of the Group Job Search Techniques that we use is to allow the participants ample time to get to know each other. After, three training sessions we ask the participants to answer three questions:

1. describe your career objective;
2. state what you need to achieve this objective;
3. state what you can contribute to this group.

We then create a matrix with the names of the participants on the vertical and horizontal of this matrix. The leader reads each individual objective and asks each participant in-turn "if this group can help this person achieve their stated objective". By recording each response as a yes or no, the group sees for itself where the group is at. There are three outcomes of this exercise:

1. get to know each other better to discover common ground for group work;
2. change objectives through discussion;
3. disband the group due to lack of will to make the group work for everyone.

Where a common experience base already exists group job search works well. In a layoff situation, where co-workers know each other, group job search can be formed easily. At community centers where there are parent child groups, group job search is well received and very quickly taken over by the participants. Church support groups have found aspect of this approach useful.

Group job search satisfies the need of the individual to participate and to belong to something. It reduces their sense of ostracism and increases their ability to become employed.

I feel that I have established in your mind my understanding of marketing vocational counselling in the community and my definition of the post-separation syndrome. I have presented a link between career decision-making and networking and group job search.

AN ANALYSIS OF CAREER INDECISION AMONG COLLEGE AND UNIVERSITY STUDENTS

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INTRODUCTION

We became aware of work as a fact of life when we are still children through our perception of the roles played by our parents and those older than ourselves. As we become older, we take an increasingly active role in working life until such time that, voluntarily or mandatorily, we begin to devote less energy to it.

Super (1953, 1957) used a curve to show an individual's involvement in working life. He divided it into five major stages, namely, growth (0-14), exploration (15-24), establishment (25-44), maintenance (45-64) and decline (65 and older). The terms chosen designate the major concern with respect to work at various stages.

Career development is part of this process. Defined as the series of positions held by a person or, more broadly, the various roles played by a person during his lifetime, a career is always extremely individualized. To some extent, its final form can be viewed only in retrospect. Nevertheless, establishing and managing a career presents a major challenge. Career development is an ongoing process of developing alternatives, making choices and implementing decisions. A career tells the story of a life. The periods of indecision that mark this process precede those times when a person takes charge and uses the opportunity presented to shape his future.

Recent studies (Hamel, 1981; De Coster and Mable, 1981; and Weissberg, Berentsen, Côté, Cravey and Heath, 1982) have shown that college and university students are very much concerned about their educational and vocational development.

The extent of their concerns is shown by the expectations they express to counselling services (Hamel, 1981; and Carney and Barak, 1976) and the number of requests for assistance made to professional counsellors. Students uncertain about their studies and careers represent a significant portion of the day-to-day clientele of professional counsellors (Harman, 1973).

A number of authors (Jones and Chenery, 1980; Daniels, 1982; and Holland, 1978) feel that the efforts made by counsellors to provide adequate assistance to students have always been hindered by a limited understanding of career indecision and the lack of a flexible diagnostic method. Until recently, career indecision was considered to be dichotomous phenomenon. For a long time, researchers tried to divide students into two large, distinct groups - those who were uncertain about their studies and careers and those who were not. It was only in the light of the non-conclusive results of a number of studies (Ashby, Wall and Osipow, 1966; Baird, 1968, 1969; Elton and Rose, 1971; Holland and Nichols, 1964; Lunneborg, 1975; Barak, Carney and Archibald, 1975; Bohn, 1968; Greenhaus and Simon, 1977; Harman, 1973; Hawkins, Bradley and White, 1977, Holland, Gottfredson and Nafziger, 1975; Kimes and Troth, 1974; Rose and Elton, 1971; and Walsh and Lewis, 1972) that a number of authors stopped considering undecided students as a homogeneous group having a set of common characteristics and began insisting on the importance of a diagnostic method that would be better able to differentiate among the individual problems associated with the career decision making.

This awareness gave fresh impetus to research and, in recent years, a new approach has evolved. This approach attempts to identify the various reasons or groups of reasons that college and university students uncertain about their studies and careers associate with their indecisiveness. Three measurement tools have subsequently been developed [Vocational Decision Making Difficulty Scale (Holland and Holland, 1977); Career Decision Scale (Osipow, Carney and Barak, 1976); and Vocational Decision Scale (Jones and Chenery, 1980)]; however, their statistical reliability has yet to be shown (Slaney, Palko-Nonemaker and Alexander, 1981).

These tools, which will no doubt have an impact on future research, appear to me to be difficult to use without a theoretical model enabling us to identify, understand and situate the many factors affecting career decision making. The career decision making model developed by Harren (1979a) performs this function, and the conceptual scheme he has provided may be used advantageously for diagnostic purposes.

I have adapted Harren's model and, in the first part of this paper, I will discuss it in the light of a number of studies that have examined the phenomenon of career indecision from the point of view of one or more of the variables contained in the model. The purpose of this is to show the relevance of the various theories put forward by Harren (1979a), using the results of recent studies done on college and university students who are undecided about their studies and careers.

The second part of the paper will examine a diagnostic method that may help identify various levels of difficulties encountered by such students.

CAREER DECISION MAKING MODEL

If there is one common characteristic shared by young people seeking counselling, it is that their problems are felt to be a slowdown or a temporary halt in their development and that they know they have to do something. They are, in a way, suspended in time; this is evident from comments typically expressed by such persons when they first come for counselling. Who among us has not heard in every tone of voice, and with almost disconcerting regularity, comments such as "I don't know what to do", "There's no room for advancement", "I'm just putting in time", and other such phrases expressed by those seeking assistance.

Behind these redundancies and apparent uniformity, however, there are significant differences. A closer look at the problem reveals that the degree of slowdown experienced by such persons ranges from temporary inertia to almost total paralysis, accompanied by a high level of anxiety. Furthermore, for the same degree of indecisiveness, two persons will not necessarily respond equally well to the same type of assistance.

Harren's model (1979a) has the advantage of explaining a number of forces that come into play at such times in the career decision making process and to consider as a whole a set of variables that have often been dealt with separately.

The model shown in Table I puts forward that the progress made in the decision making process is dependent on the characteristics of the person trying to reach a decision (internal conditions) as well as the environmental conditions (external conditions).

The process, which is central to the model, involves a series of four steps (awareness - planning - commitment - implementation) through which a person must pass when making and carrying out his decisions.

Internal conditions refer to the characteristics of the person making a decision. They include his psychological state, self-concept, style of decision making, degree to which he has accomplished developmental tasks for his age and level of cognitive complexity.

External conditions refer to the environmental conditions as well as to immediate and anticipated factors influencing the person.

Let us examine each of these elements in more detail.

The Process

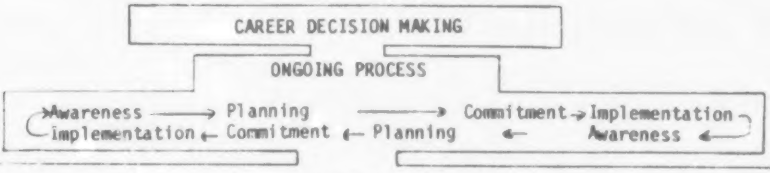
It must first be understood that career decision making is a psychological process in which a person organizes information, examines various alternatives and then commits himself to a course of action likely to ensure his development. This is what Harren (1979a) tried to define in the four steps shown in Table I.

Should a person beome dissatisfied or worried after assessing his situation (awareness), he will be inclined to examine various ways of correcting the situation and will begin to explore and weigh a number of alternatives that will lead him to choose one (planning) that he will incorporate into his self-concept (commitment) and that he will implement (implementation or execution).

This series of steps is based on the work of Tiedeman and O'Hara (1963). A tool developed by Harren (Assessment of Career Decision Making, 1978) may be used to determine the stage a person is at in the process. Studies revealed that there was a highly positive correlation between the

Table I

CAREER DECISION MAKING MODEL*


CAREER DECISION MAKING
ONGOING PROCESS
Awareness
Planning
Commitment
Implementation
Implementation
Commitment
Planning
Awareness

INFLUENCED BY

INTERNAL CONDITIONS

Psychological state:
- Anxiety level
- Response to this anxiety

Self-concept:
- Identity
- Self esteem

Decision making style:
- Rational, intuitive, dependent

Degree of accomplishment of developmental tasks:
- Autonomy
- Interpersonal maturity
- Sense of purpose

Level of cognitive complexity:
- Dualism, multiplicity relativism or commitment

EXTERNAL CONDITIONS

Value of the situtation in terms of:
- Success
- Satisfaction
- Outlook

Circumstances:
- Imminence of the decision to be made
- Number of alternatives
- Consequences

Decision making context:
- Mutuality
- Support
- Probability

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* Adaptation of the career decision making model proposed by Harren (1979), "A model of career decision making for college students", Journal of Vocational Behavior, 14, pp. 119-133.

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results obtained using this scale (which measures progress in the decision making process) and the degree of certainty and satisfaction felt by college students with respect to their choice of curriculum and career (Harren, 1979b; and Jones and Chenery, 1980). It should be pointed out that, in the modified form of this measuring tool, the individual scales that originally measured progress through the various stages in the decision making process now measure in a more overall way adaptation to college life and vocational commitment (Berger-Gross et al, 1973).

External conditions

The career decision making process discussed here is an ongoing and circular process that is both progressive and adaptive. When we work with young people or adults, we must not forget that they have already started on their career path, that they have made previous decisions, and that when they come in for counselling, they are experiencing the ramifications of previous plans.

This leads me to discuss the first of a number of external conditions that may initiate a new decision making process, namely, how a person views his situation in terms of success, satisfaction and outlook.

Success means the degree of acceptance, respect, esteem, and recognition shown by a person's friends and acquaintances (professors, employers, peers, co-workers, and friends) to that person or, more tangibly, the extent to which an individual is rewarded for his efforts in the form of good grades, salary increases, promotions, etc. (Harren, 1979a, page 123). If there is a lack of such positive feedback, the person will probably try to develop some new course of action.

Satisfaction means the extent to which a person's situation meets his needs and values as well as the level of self-actualization that he may experience in his particular circumstances (Harren, 1979a, page 123). If there is no harmony, the person will probably seek out new alternatives.

The value of the situation in terms of outlook is something I added when thinking of persons who finish a particular stage and who must go through a transition period -- for example, at the end of their college or university studies, when a factory closes, when they are laid off, etc.

We have just examined three aspects that may lead a person to view his situation less favourably. It is important to take the time to identify them because they constitute the starting point of a new process and help to define the problem and the objectives for change -- which has not always been done when the person comes in for counselling.

In a study aimed at revealing the various reasons why university students change programs (Hamel, Bellerive, 1977), we were able to assess the importance of the various precipitating factors. A more detailed list of the different factors that may lead to performance or adaptation problems in a specific insitutional or organizational environment may be found in the works of Campbell and Cellini (1981).

Another variable that has an impact on the initiation and development of the career decision making process is the imminence of the decision to be made. This variable refers to the time available to make a decision. Practical experience reveals that too much time is just as bad as not enough, for both may interfere in the decision making process. A person who has too much time tends to delay the decision and does not feel worried enough to initiate the process; whereas too little time tends to lead to hypervigilance, that is, a state of panic that interferes with adequate processing of the information. Holland and Holland (1977) and Janis and Mann (1977) have studied this time factor.

The external conditions that have the greatest impact in the planning stage are the number of alternatives that the person could imagine, the perspicacity with which the person sees the positive and the negative consequences associated with the various alternatives and what I termed mutuality. This last variable refers to the extent to which other significant persons are affected by the decision. This would be the case, for example, of a couple both of whom are very involved in their respective careers and where the decision of one party may affect the other's career.

Support and probability, the last two external conditions, are major factors affecting the implementation stage. For example, has the person the emotional and financial support to implement his chosen course of action? Do his plans depend on a reciprocal decision, such as being accepted in a particular program of study or obtaining a particular job?

These variables together make up the external conditions. It is important when analysing a situation to try to assess the situation of the person making the decision in terms of all these variables.

Internal conditions

The internal conditions constitute another group of variables that should be examined.

The psychological state, which is the first internal condition listed in Table I, refers to the visible anxiety level displayed by the person making the decision and the person's response to this anxiety.

A number of authors who have written about career indecision have looked at the "anxiety" variable. Although their conclusions differ to some extent, the results of a number of studies done on college students have shown that students who were undecided about their curriculum and career had a higher anxiety level (Hawkins, Bradley and White, 1977; Brown and Strange, 1981; Kimes and Troth, 1974; and Jones and Chenery, 1980).

From a practical point of view, these observations appear to me to be highly significant, for I strongly believe that a person decides to undertake a decision making process enabling him to take the necessary action based on his response to the anxiety caused by an unsatisfactory situation.

It was along these lines that Hawkins, Bradley and White (1977), who examined career indecision from the viewpoint of anxiety, interpreted their results. After showing that college students who were uncertain about their programs of study had a significantly higher anxiety level, they advanced that there was reason to believe that because of the anxiety felt, some students simply deferred the choice of a program of study or a profession, thereby avoiding the tasks essential to their career development.

Hawkins, Bradley and White also stressed the importance of helping these students to come to terms with their anxiety so that they would undertake activities that would lead them to make decisions and to accept responsibility for them.

The work of Janis and Mann (1977) is very enlightening in this regard and, in addition, identifies five behaviour patterns that affect the quality of decision making.

A person exhibiting the first behaviour pattern, termed "vigilance", is motivated by his anxiety or his stress and starts the decision making process.

The four other patterns or types of responses to stress are considered to be defensive reactions that interfere with the vigilant processing of the information, thereby jeopardizing the commitment to and the progress made in the decision making process. These behaviour patterns are:

1. Quick recourse to the status quo
2. Unconflicted change (quick recourse to an alternate solution)
3. Avoidance by deferring the decision or transferring responsibility
4. Hypervigilance (stage of panic that makes a person seek a solution in a frenetic way)

In the light of Goodstein's work (1972), I would like to add a last point concerning these variables. For Goodstein (and I believe that practical experience can substantiate his view), there are two major subgroups of undecided students if we look at them in terms of anxiety. There are those who are undecided and for whom anxiety is circumstantial and of a temporary duration. Such anxiety is the direct result of unresolved career planning worries (Borger-Gross et al, 1983). There is reason to believe, as we will see in the second part, that this type of anxiety may be put to constructive use by the introduction of appropriate psychological conditions.

Students in the second subgroup experience a more generalized form of anxiety that may be considered an individual trait and that requires greater therapy.

The failure to make such a distinction in a systematic way may explain the ambiguity in the results of studies that have examined this variable. A close examination of the results of these various studies shows that, whereas the measurements of situational anxiety seemed to clearly differentiate between students who had decided about their studies and careers and those who had not (Hawkins et al, 1977; and Brown and Strange, 1981), the same cannot be said of "trait anxiety" measurements (Hawkins et al, 1977). This more generalized form of anxiety seems to be found only in a subgroup of the undecided students (Hartman and Brown, 1981; and Jones and Chenery, 1980).

Self-concept

Super, Starishevsky, Mattin and Jordan (1963) proposed that persons with greater self-perception and self-assurance are more capable of assessing how well various career possibilities may meet their needs. Drawing on this theory, Harren (1979a) stressed the self-concept variable; this is understandable as a person draws the information required to make a decision, particularly in the planning stage, from his self-concept.

The two aspects of self-concept that are central to Harren's model are identity and self-esteem.

Identity refers to the level of differentiation and integration of the self-concept, that is, the extent to which a person is conscious of his attributes and has a unified and consistent image of them (Harren, 1979a page 124).

Self-esteem is the evaluative aspect of self-concept and refers to a person's subjective satisfaction with who he is (Harren, 1979a, page 124).

The relevance of both these variables has been shown by studies on students who were undecided as to their future. In particular, Holland's work on identity reveals some conclusive results.

After developing an identity scale (Holland, Gottfredson and Nafziger, 1975) designed to measure how well a person is aware of his own skills, preferred activities, interests, and vocational goals, Holland and Holland (1977) showed that college students who had not yet made a decision as to a career had a much less clear sense of identity than those who said they were decided, that is, they had a changing self-image and were unable to define their personal characteristics or relate them to occupational possibilities. Jones and Chenery (1980) obtained similar results using the same identity scale.

Studies have also shown that students who have decided about a career not only have greater self-esteem than those who are not sure (Wigent, 1974; and Resnick, Fauble and Osipow, 1970), but that their greater self-esteem enabled these students to choose careers that were more in keeping with their self-image and personality style (Korman, 1966, 1967a, 1967b; and Léonard, Walsh and Osipow, 1973). Furthermore, it may also be advanced that persons with greater self-esteem will react more positively in an unsatisfactory situation than those with lower self-esteem.

Styles of decision making

Decision making style refers to the characteristic way in which a person makes decisions. Harren's model (1979a) identifies three main styles: rational, intuitive and dependent. Persons who adopt one of the first two styles (rational or intuitive) assume responsibility for their decision making, whereas those who adopt the dependent style tend to pass on responsibility to a third party. This last style of decision making is similar to the behaviour pattern of defensive avoidance by transferring responsibility identified by Janis and Mann (1977). Although the anxiety associated with decision making may be reduced by using this style, there is a risk that the person will not be truly committed to the solution he has adopted and will not be very satisfied. Harren (1979a p 125) describes those who typically use this decision making style as greatly influenced by others' expectations and wishes of them. They tend to be passive and compliant, have a great need for social acceptance and see the environment as offering limited possibilities.

Persons adopting either of the other styles of decision making assume responsibility for their actions, but their way of going about it differs greatly.

The rational style involves a realistic self-assessment; the individual analyses the situation and carries out his decisions deliberately and logically. Time is a major factor and, as these persons expect to have to make a decision in the more or less immediate futures, they prepare themselves by gathering information about themselves and the environment (Harren, 1979a, page 125).

The intuitive style involves little anticipation of the future. Much less time and effort is spent assessing the situation and seeking information. This style is characterized by the use of fantasy and attention to present feelings as a basis for decision making. Commitment to a course of action is reached relatively quickly, and its basic rightness is felt internally. Often the individual cannot explain explicitly how he reached the decision (Harren, 1979a, page 125).

To my knowledge, no studies have attempted to compare the decision making styles of decided and undecided students. Nevertheless, it is an important aspect to analyse, for studies are beginning to reveal that these various decision making styles require different courses of action.

Rubinton (1982) concluded that if the dependent decision making style is an inadequate one, then we should try to change it; the rational and intuitive styles are effective as long as we adapt our intervention accordingly.

Accomplishment of developmental tasks

Another condition proposed by Harren (1979a) is the extent to which developmental tasks specific to the age group to which the person making the decision belongs have been achieved. Given that his model was specifically aimed at college students, ie, young adults, Harren chose autonomy, interpersonal maturity and sense of purpose (three developmental variables identified by Chickering (1969) as major aspects to consider.

Autonomy implies the ability to be relatively free of the need for other people's approval and the ability to engage in instrumental, goal-directed behaviour in relation to one's needs (Harren, 1979a, page 126).

Interpersonal maturity involves the capacity to develop flexible, mutually trusting relationships with others (Harren, 1979 p 126).

Sense of purpose, which is closely related to the two other variables, involves a future orientation in which one is aware of the working world and one's potential place in that world. It also involves planning one's desired lifestyle (Harren, 1979a, page 126).

The significance of these different variables was verified, and it can be seen that, compared with undecided students, students who knew what they wanted displayed greater self-confidence (Kelso, 1976), were more co-operative (Wigent, 1974), had better interpersonal skills (Holland and Holland, 1977; and Kelso, 1976), placed greater importance on work in the context of their lives as a whole (Jones and Chenery, 1980; and Greenhaus, 1977), and placed more emphasis on their vocational training (Baird, 1969).

When working with adults (30 and older), the extent to which they have accomplished the developmental tasks previously mentioned remains important, but in my opinion the challenges change. At the end of adolescence (18-22), people are defining their identity, and at the beginning of adulthood (23-30), they are asserting their identity in various roles such as worker, spouse, and parent. Persons thirty years and older, however, must develop in these different roles, and the major challenge that comes into play is more with respect to the creative process versus stagnation.

Level of cognitive complexity

A last variable that was not used in the studies conducted on undecided students or originally included in the model developed by Harren (1979a) is the level of cognitive complexity, as defined by Perry (1970).

I decided to include this variable because when checking a new instrument designed to measure this variable, Erwin (1983) began to reveal significant relationships between the level of cognitive complexity and factors such as independence, self-confidence, etc.

I also included this variable because Perry's scheme (1970) with its various levels of intellectual development (dualism, multiplicity, relativism and commitment), which was originally aimed at defining the qualitative differences among college students in their way of thinking about knowledge and, consequently, in their way of defining the role of professor, may be used to define their perception of work, the process of decision making and the role of counsellor.

Persons whom we would term "dualists" view reality in black or white, or good or bad. They have a locus of external control and will turn to the counsellor -- an authority figure to them -- to find the right answer. It is only if they begin to progress toward the stages of relativism and commitment within relativism that they may be able to develop a locus of internal control and a capacity for analytical reasoning, enabling them to commit themselves in a responsible way to any decision making process, that is, to formulate possible courses of action and to adopt one with all the risk and ambiguity associated with it (Knefelkamp and Slepitza 1976; Gordon, 1981; Reynolds Welfel, 1982; Wertheimer, 1979).

Theoretically, in the diagnosing and planning stages, the counsellor should develop the clearest possible idea of the person seeking counselling in terms of all of the variables identified above; eventually, each resulting profile will be unique and will require individualized action.

A CLASSIFICATION SCHEME OF DIFFICULTIES ASSOCIATED WITH CAREER DECISION MAKING

This split image of the undecided person leads to certain generalizations, and it is possible to derive from the interaction of the various factors involved a classification scheme of difficulties associated with career decision making that may prove useful for diagnostic purposes.

The works of Holland and Holland (1977) are particularly significant among the studies that have attempted to divide the student population who are undecided with respect to their studies and their careers into subgroups because of their insistence on distinguishing between students who are merely undecided as opposed to those who are inclined to be undecided.

The classification scheme that my colleagues and myself (Gauthier, Hamel, Landry, 1980) had begun to develop recognizes this major distinction, bringing to mind the theories of Goodstein (1972). It is essentially based on assessing a person's ability to go through the decision making process and classifies into four major syndromes the various levels of difficulty displayed by our students.

A) Indecision syndromes

The existence of situational anxiety without trait anxiety characterizes both the indecision syndromes we identified. The distinction between an indecision syndrome of a specific nature and an indecision syndrome of a multiple nature is based on the person's response to this anxiety.

1) Indecision syndrome of a specific nature

The indecision syndrome of a specific nature is characterized by a vigilant attitude. This category includes students who are basically autonomous and who are relatively advanced in the decision making process. They have a clear idea of who they are and, theoretically, they should have reached the multiplicity and relativism stages with respect to their cognitive development (Gordon, 1981). They realize that there are several viable alternatives open to them, and they will easily be able to choose one, despite the risks that may go along with this. Their decision making style may be rational or intuitive, but definitely not dependent. They are often at the commitment stage in the decision making process, and they use their interview with the counsellor to sound him out about their intentions.

The counsellor in this case has a very important role to play in assisting the student to assess his decision making up to that point and in helping him develop means of implementing his decisions. Once this is done, the counsellor will help the student to incorporate his new commitments into his self-image and will reduce expectation anxiety.

2) Indecision syndrome of a multiple nature

This category includes students who employ one or more of the defensive behaviour patterns identified by Janis and Mann (1977).

Their inertia is situational and temporary. Their involvement in the decision making process can be increased by creating the psychological conditions required to adopt a vigilant attitude. These various conditions, which were also identified by Janis and Mann (1977), are directly related to the defensive behaviour patterns mentioned in the first part.

They are: The clear awareness that there is a serious threat in not doing anything (to counter quick recourse to the status quo).

The clear awareness that there are serious risks in adopting the first solution thought of without weighing the pros and cons (to counter unconflicted change).

The hope that serious consideration may lead to a satisfactory solution (to counter avoidance).

> The belief that there is sufficient time to make a proper decision (to counter hypervigilance).
> These students often have little confidence in their ability to solve the problems they face (Osipow et al, 1976; and Holland and Holland, 1977), and they may tend to adopt a dependent decision making style. Some of them take refuge in a dualist position and will turn to the counsellor to try to find out "where they belong".

In addition to dealing with the student's belief in a magic solution, the counsellor in this case has a very important role to play in guiding the student through the various stages of the decision making process. Students in this category often need to improve their decision making skills. They may be missing one or more of the specific skills identified by Crites (1978) (self-evaluation, educational and vocational data gathering, goal selection, planning, and problem solving).

It is interesting to see various authors trying to apply the self-efficacy concept developed by Bandura (1977) to career decision making (Taylor, and Betz, 1983; and Lecomte, 1983). According to Bandura (1977), a person's opinion of his ability to successfully carry out a specific task or behave in a certain way conditions his commitment to this task or behaviour pattern.

It may be assumed if a student were to acquire various specific skills that he was not aware of having, it would help him to change his opinion of himself and would help him become more involved in a decision making process.

B) Disposition toward indecision syndrome

1) Situational

The third syndrome, which we have termed "disposition toward indecision syndrome of a situational nature" is characterized by a sudden breakdown in the implementation process because of external interferences beyond a person's control.

This category includes persons who have not been accepted into a specific program because of quotas, those who have been dropped from a particular program because of unsatisfactory results, or those who find themselves unemployed because they were not able to make use of their training.

Such persons often experience a major shock when they find themselves unable to carry out their plans, and they must deal with the crisis before going on again.

More and more, such breakdowns are being compared to sorrowful experiences such as sickness or death. The stages of unemployment identified by Limoges (1933) clearly show the steps involved in resolving the crisis that follows such breakdowns. Only after they have gone through the stages of denial, anger, bargaining, and despair do such persons gain a new awareness of their situation and are able to undertake a new decision making process in which they are able to identify and carry out new commitments.

When they come in for counselling, students in this category may be at one stage or another in resolving the crisis, and the counsellor must be careful because of the feeling of shame often felt by such students and their tendency to conceal such traumatic experiences. This is particularly true when the breakdown happened some time ago, and the person is in the bargaining or despair stage. A willingness to study anything at all for the sake of studying, a long history of program changes, combined with contempt for those programs already tried, and little hope for the future always arouse my curiosity, for it is not unusual to find that the persons in question have experienced breakdowns such as those described above.

I have noted that such persons rarely make an immediate connection between their current experiences and these breakdowns. I have also observed that it was very useful for them to determine what they really wanted from what they were denied before seeking satisfaction in new objectives.

2) Personal

The last syndrome, termed "disposition toward indecision of a personal nature" is characterized by a lack of internal conditions required to become involved in the decision making process.

This category includes students who do not have the necessary personal resources to become involved. A similar category was shown to exist in a number of recent studies (Holland and Holland, 1977; Jones and Chenery (1980), and Hartmen, 1981. It related the number of reasons mentioned by undecided students to explain their indecision and a set of personal variables.

Students who show such a high level of indecisiveness have an unclear sense of identity and poor interpersonal skills. They have negative vocational attitudes, they are not very involved in the decision making process, and they lack a positive direction with respect to work and independence in making decisions. Their locus of control is external, and they tend to be more disposed toward anxiety (trait anxiety).

"Disposition toward indecision" was first introduced by Holland and Holland (1977) as the outcome of a life history in which a person has failed to acquire the necessary self-confidence, initiative and tolerance for ambiguity to cope effectively with career decision making and is similar to the concept of "indecisiveness" proposed by Goodstein (1972).

In my opinion, anxiety as a personal trait plays a very significant role as a cause of the problems encountered by persons who belong to this category. The seriousness of the difficulties encountered by some of them may sometimes require long-term therapy (Borden and Kopplin, 1973). For many of them, however, counselling with sustained individual assistance provides an opportunity for growth and the basis for developing their identity. Persons in whom this indecisive disposition may be qualified as slight often view decision making as a major personal challenge; consequently, it is not unusual to see persons who display an active-dependent behaviour pattern refuse to develop and implement specific projects for fear of being rejected or humiliated. In this case of persons displaying a passive-dependent behaviour pattern, it is not uncommon to see them hesitate to carry out plans for fear of losing the affection of the people around them and finding themselves isolated.

Practical experience has shown me that once such persons know what is at stake, they can adopt a more positive attitude with regard to their career and commit themselves to making a career decision.

CONCLUSION

It is difficult for me to predict the degree of professional agreement that we could obtain in a study whose objective would be to test the reliability of this classification scheme. Consequently, it is difficult to predict how useful a similar classification scheme could be for us.

The main reason for presenting this scheme was to stress how misleading it could be to consider students uncertain about their studies and their careers as a homogeneous group, displaying a set of common characteristics, and how misleading it could also be to believe that a limited and determined number of course of action could help these same students to come to terms with their indecisiveness.

I also wanted to show how such a clientele can offer interesting challenges, provided that we are aware of the variety and complexity of the difficulties encountered by them.

To me the aim of career counselling is to give persons the means to take charge of their own careers. I hope that the points that I have discussed will be of some use to you in attaining this objective.

The ideas that I have presented to you, however, should not be considered as a point of arrival, but rather as the beginning of a process that will hopefully lead to new avenues of research and more diversified assistance methods.

In the model I have presented, progress in the decision-making process is the ultimate aim of our actions. The model also explains some of the forces that are likely to influence the decision-making process. I have noted, in passing, various studies that have looked at students who are uncertain about their studies and careers from the point of view of one variable or another contained in the model. Nevertheless, there is still a need for more research to examine the many interrelations between these variables.

REFERENCES

ASHBY, J.D., WALL, H.W., OSIPOW, S.H., (1966) Vocational certainty and indecision in college freshmen, Personnel and Guidance Journal, vol. 44, 1037-1041.

BAIRD, L.L., (1968) The indecision scale: a reinterpretation, Journal of Counselling Psychology, vol. 15, 174-179.

BAIRD, L.L., (1969) The undecided student - how different is he? Personnel and Guidance Journal, vol. 47, 429-434.

BANDURA, A., (1977) Social Learning Theory, Englewood Cliffs, N.J.: Prentice-Hall.

BARAK, S., CARNEY, C.G. et ARCHIBALD, R.D., (1975) The relationship between vocational information seeking and educational and vocational undecidedness, Journal of Vocational Behavior, 7, 149-159.

BERGER-GROSS, V., KAHN, M.W., WEARE, C.R., (1983) The role of anxiety in the career decision making of liberal art students, Journal of Vocational Behavior, 22, 312-323.

BOHN, M.J., (1968) Vocational indecision and interest development in college freshmen, Journal of College Student Personnel, 9, 393-396.

BORDIN, E.S. et KOPPLIN, D.A., (1973) Motivational conflict and vocational development, Journal of Counselling Psychology, vol. 20, no 2, 154-161.

BROWN, C.G. et STRANGE, C., (1981) The relationship of academic major and career choice status to anxiety among college freshmen, Journal of Vocational Behavior, 19, 328-334.

CAMPBELL, R.E. et CELLINI, J.V., (1981) A diagnostic taxonomy of adult career problems, Journal of Vocational Behavior, 19, 175-190.

CARNEY, C.G. et BARAK, A.A. (1976) Survey of student values and student personnel services, Journal of College Student Personnel, 17, 280-284.

CHICKERING, A.W., (1969) Education and Identity, San Francisco: Jossey-Bass.

COLE, C.W., OETTING, E.R. (1968) Development of the concept-specific Anxiety Scale (Tech. Rep. no. 3) Washington, D.C.: U.S. Department of Health, Education and Welfare, Social and Rehabilitation Services.

CRITES, J.O., (1978) *Career Maturity Inventory: Theory and Research Handbook*, Montery, Calif.: CTB/McGraw-Hill.

DANIELS, M.H., (1982) The heuristic value of Harren's career decision-making model for practitioners, *Journal of College Student Personnel*, vol. 23, no 1.

DeCOSTER, D. et MABLE, P., (1981) Understanding Today's Students, *New Directions for Student Services*, no 16.

ELTON, C.F., ROSE, H.A., (1971) A longitudinal study of the vocational undecided male student, *Journal of Vocational Behavior*, vol. 1, 85-92.

ERWIN, T.D., (1983) The scale of intellectual development: measuring Perry's scheme, *Journal of College Student Personnel*, vol. 24, no 1.

GORDON, V.N., (1981) The undecided student: a developmental perspective, *The Personnel and Guidance Journal*, vol. 59, no 7.

GAUTHIER, G., HAMEL, H., LANDRY, L., (1980) Nosologie de la prise de décision d'orientation, *Le phénomène de l'indécision vocationnelle*, Service d'orientation et de counselling, Laval University.

GOODSTEIN, L., (1972) Behaviour theoritical views of counselling, In B. Stefflre (ed.), *Theories of Counselling*, pp. 140-192, New-York: McGraw-Hill.

GREENHAUS, J.H. et SIMON, W.E., (1977) Career salience, work values and vocational indecision, *Journal of Vocational Behaviour*, 10, 104-110.

HAMEL, H., (1981) *Étude de besoins: aperçu général des objectifs et des attentes des étudiants de l'Université Laval*, Service d'orientation et de counselling, Laval University.

HAMEL, H. et BELLERIVE, A., (1977) *Les changements de programme: une étude explorative*, Service d'orientation et de counselling, Laval University.

HARMAN, R.L., (1973) Students who lack vocational identity, *Vocational Guidance Quarterly*, 21, 169-173.

HARREN, V.A., (1978) *Assessment of Career Decision-Making (ACDM), Counsellor/instructor guide. Unpublished manuscript*, Southern Illinois University at Carbondale.

HARREN, V.A., (1979a) A model of career decision making for college students, *Journal of Vocational Behavior*, 14, pp. 119-133.

HARREN, V.A., (1979b) Research with the assessment of career decision making, Character Potential: A Record of Research, vol. 9, no 2.

HARTMAN, B.W. et BROWN, D.F., (1981) The construct validity of the "career decision scale" adapted for graduate students. Texte présenté lors du congrès annuel (1981) de l' "American Personnel and Guidance Association".

HAWKINS, J.G., BRADLEY, R.W., WHITE, G.W., (1977) Anxiety and the process of deciding about major and vocation, Journal of Counselling Psychology, 24, 398-403.

HEALY, C.C., Career Development: Counselling Through the Life Stages, Allyn and Bacon, Toronto, 1982.

HOLLAND, J.L., (1978) Promoting vocational exploration and decision making among High School and College students, School Guidance Worker, vol. 33.

HOLLAND, J.L., GOTTFREDSON, G.D. et NATZIGER, D.H., (1975) Testing the validity of some theoretical signs of vocational decision-making ability, Journal of Counselling Psychology, 22, 411-422.

HOLLAND, J.L., GOTTFREDSON, D.C. et POWER, P.G., (1980) Some diagnostic scales for research in decision making and personality: Identity, Information and barriers, Journal of Personality and Social Psychology, vol. 24, no 5, 404-414.

HOLLAND, J.L., HOLLAND, R.C., (1977) Vocational indecision: more evidence and speculation, Journal of Counselling Psychology, 24, no 5, 404-414.

HOLLAND, J.L., NICHOLS, R.C., (1964) The development and validation of an indecision scale: the natural history of a problem in basic research, Journal of Counselling Psychology, vol. 11, 27-34.

JANIS, I.L., MANN, L., (1977) Decision Making: A Psychological Analysis of Conflict, Choice and Commitment, The Free Press, Macmillan Publishing, N.Y.

JONES, L.K. et CHENERY, M.F., (1980) Multiple subtypes among vocationally undecided college students: A model and assessment instrument, Journal of Counselling Psychology, vol. 27, no 5, 469-477.

KELSO, G.I., (1976) Exploration of the developmental antecedents of Holland's occupational types, Unpublished Doctoral Dissertation, John Hopkins University.

KIMES, H.G. et TROTH, W.A., (1974) Relationship of trait anxiety to career indecisiveness, Journal of Counselling Psychology, 21, 277-280.

KNEFELKAMP, L. et SLEPITZA, R., (1976) A cognitive developmental model of career development: An adaptation of the Perry scheme, The Counselling Psychologist, vol. 6, no 3.

KORMAN, A.K., (1966) Self-esteem variable in vocational choice, Journal of Applied Psychology, vol. 50, no 6, 479-486.

KORMAN, A.K., (1967a) Relevance of personal need satisfaction for over-all satisfaction as a function of self-esteem, Journal of Applied Psychology, vol. 51, 533-538.

KORMAN, A.K., (1967b) Self-esteem as a moderation of the relationship between self-perceived abilities and vocational choice, Journal of Applied Psychology, vol. 51, no 1, 65-67.

KRUMBOLTZ, J.D., (1979) The effect of alternative career decision-making strategies on the quality of resulting decisions, Final report Stanford, Calif: Stanford University. (ERIC Document Reproduction Service No. ED. 195 824).

LECOMTE, C., (1983) L'avenir de la psychologie du counselling: un problème d'orientation, CONNAT, Emploi et Immigration Canada.

LEONARD, R.L., WALSH, W.B., OSIPOW, S.H., (1973) Self-esteem, self-consistency and second vocational choice, Journal of Counseling Psychology, vol. 20, no 1, 91-93.

LIMOGES, J., (1983) L'impact psychosocial du chômage: les phases. Chômage, Mode d'emploi, Chapter III. Les éditions de l'Homme, Montreal.

LUNNEBORG, P.W., (1975) Interest differentiation in high school and vocational indecision in college, Journal of Vocational Behavior, vol. 7, 297-303.

OSIPOW, S.H., CARNEY, C.G., BARAK, A., (1976) A scale of educational-vocational undecidedness: a typological approach, Journal of Vocational Behavior, vol. 9, 233-243.

PEAVY, R.V., (1981) Le counselling des adultes en vue de la prise de décision: une orientation pragmatique, La direction de l'analyse et du développement - Professions et carrières d'Emploi et Immigration Canada, Ottawa-Hull.

PERRY, R.V., (1981) *Forms of intellectual and ethical development in the college years*, New-York: Holt, Rinehart et Winston.

PHILLIPS, S.D. et STROHMER, D.C., (1982) Decision-making style and vocational maturity, *Journal of Vocational Behavior*, 20, 215-222.

RESNICK, H., FAUBLE, M.L., OSIPOW, S.H., (1970) Vocational crystallisation and self-esteem in college students, *Journal of Counselling Psychology*, vol. 17, no 5, pt. 1, 465-467.

REYNOLDS WELFEL, E., (1982) The development of reflective judgement: implications for career counselling of college students, *The Personnel and Guidance Journal*, vol. 61, no 1, 17-21.

ROSE, H.A. et ELTON, C.F., (1971) Attribution and the vocationally undecided student, *Journal of Vocational Behavior*, 1, 99-103.

RUBINTON, N., (1980) Instruction in career decision making styles, *Journal of Counselling Psychology*, vol. 27 (6), 581-588.

SELIGMAN, L., (1980) *Assessment in developmental career counselling*, The Carroll Press, Rhode Island.

SLANEY, R.B., PALKO-NONEMAKER, D. et ALEXANDER, R., (1981) An investigation of two measures of career indecision, *Journal of Vocational Behavior*, vol. 18, 1, 92-103.

SUPER, D.E., (1953) A theory of career development, *American Psychologist*, 8, 185-190.

SUPER, D.E., STARISHEVSDY, R., MALTIN, N., JORDAN, J., (1963) *Career Development: Self-Concept Theory*, Princeton, N.J.: College Entrance Examination Board.

SUPER, D.E., *The Psychology of Careers*, New-York: Harper and Row, (1957).

TAYLOR, K.M. and BETZ, N.E., (1983) Application of self-efficacy theory to the understanding and treatment of career indecision, *Journal of Vocational Behavior*, 22, 63-81.

TIEDEMAN, D. et O'HARA, R.P., *Career Development: Choice and Adjustment*, New-York: College Entrance Examination Board, 1963.

WALSH, W.B. and LEWIS, R.O., (1972) Consistent, inconsistent, and undecided career preferences and personality, *Journal of Vocational Behavior*, 2, 309-316.

WEISSBERG, M., BERENTSEN, M., COTE, A., CRAVEY, B. et HEATH, K., (1982) An assessment of the personal, career and academic needs of undergraduate students, *Journal of College Student Personnel*, vol. 23, no 2.

WERTHIMER, L.C., (1979) An integrated approach to career counselling based on the work of Tiedeman and O'Hara and Knefelkamp and Slepitza, *Character Potential: A Record of Research*, vol. 29, no 2.

WIGENT, P.A., (1974) Personality variables related to career decision-making abilities of community college students, *Journal of College Student Personnel*, vol. 15, no 2, 105-108.

NATIVE COMMUNITY EMPLOYMENT READINESS PROGRAM

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RATIONALE FOR THE PROGRAM

All workers have need of certain information when making decisions concerning what they are going to do with their lives in a work-related sense. They need to know about the variety of jobs in their home area; the skills, training, experience, physical demands, and availability of these jobs and the employment conditions related to them. It is also important for them to have some knowledge of labour market conditions in their chosen fields in areas outside their daily commuting range. Additionally, workers need to know of their own personal likes, dislikes, abilities, aptitudes, temperaments, etc., which influence their being successful or not when interacting with the unique economic, social and physical environment where-in they choose to live and work.

These environments vary considerably from locale to locale, north to south or urban or rural. The individual living in a small, remote community will not have the variety of occupational choices or the number of job opportunities as does a worker in a large industrial centre. Employer expectations and employee inter-relationships also may differ considerably.

Workers acquire this knowledge either informally by talking with or observing friends and relatives, reading papers and books or watching television or by formally inquiring about jobs and occupations from employers, guidance and employment counsellors during group or information sessions. The amount and variety of information available depends on the size of the worker's community. There are fewer information sources available in the smaller community and it is likely that there is no information about many jobs and occupations which are available outside the community.

Not having this information available can result in some workers lacking success in obtaining satisfying work despite it being available in their community. And lack of information about the alternatives available outside the community keeps them from competing for those positions.

This was the experience of a number of workers in the small logging community of Armstrong in Northern Ontario. Employers in this area were bringing workers from outside the area because they could not locate suitable workers locally despite a large number of unemployed people. It was perceived that adjustments were needed by both employers and workers. The workers' needs were:

- To obtain information regarding local and outside labour market conditions as well as occupational requirements;
- To better know their strengths and weaknesses as related to employment;
- To learn what most employers/supervisors expect of their employees and what other workers expect of their co-workers;
- To make a choice of a line of work and/or an occupation suitable for themselves;
- To develop job searching and job keeping skills;
- To identify personal inappropriate behaviours or problems affecting their employability and learn how they can be modified.

In urban centres workers' needs such as the above can be readily addressed by employment counsellors at a Canada Employment Centre in individual employment counselling sessions by assisting the worker to:

- identify the employment barriers
- develop appropriate solutions
- discuss alternatives
- develop a plan of action
- carry out the plan with assistance of appropriate C.E.I.C. programs and services.

In non-urban communities this service is not as readily available. However, it is the employment counselling policy of the C.E.I.C. that clients requiring employment counselling, or order to achieve satisfactory placement, shall receive it. While this can be accomplished best in one-to-one counselling sessions, the widely dispersed population in some northern areas combined with the limited availability of personnel and travel resources precludes the use of the preferred delivery approach in some instances.

These factors, the employment counselling needs of workers living in rural and remote communities, the C.E.I.C. policy of responding to this need, and the CEC's problem of operationalizing this policy considering available resources, fostered the development of a group counselling approach by the Thunder Bay District C.E.I.C. in cooperation with the Confederation College through an Institutional Training Adjustment Program.

The primary objective of the program was:

> To provide local workers with information needed for them to assess the opportunities of the labour market, understand themselves in terms of their abilities, aptitudes, temperaments, interests, need and capabilities, and be able to explain the consequences of making certain choices regarding occupations, jobs, and the stay-or-go option so that they can make an informed decision about what they want to do with their lives in an employment related sense.

In summary the program is seen as:

(1) A guided self-help employment barrier identifier. The worker is assisted by the other participants, the program coach and the material available to determine that which is impeding him/her from successfully participating in the labour market.
(2) A provider of solutions to these barriers; what action must be taken to remedy the problem?
(3) A labour market information provider; information about jobs in the local and outside areas, how and where to apply for them, occupational requirements, working conditions, employer expectations.
(4) An identifier of that which must be given up or endured to reach employment objectives; freedoms, life style changes, comforts, etc.
(5) A provider of inter-personal communication skills, problem identification and solving and self-assessment.
(6) It is expected that a program graduate will know what he or she wants in a work related sense and how to go about doing it.

CEC INVOLVEMENT

The CEC employment counsellor is concerned with identifying the worker's barriers to employment, developing solutions and applying appropriate programs and services while meeting employer's needs.

The past approach in the outlying communities has been to consult with community leaders and other government service delivery agencies to determine training and adjustment needs in a community. Subsequently a training course would be mounted and trainees identified and selected in consultation with the leaders and agencies.

It was felt that this did not work perfectly well. The involvement, needs, and interests of the individual worker were not being considered in the decision-making process of determining training needs to be met by in-community courses. The results were course drop-outs.

The Orientation to Employment Program provides information about the labour market demands including what is required of workers to actively compete for jobs, and helps them to make an informed decision about what part of the action they want, if any.

The results of their individual decisions together with their employment related needs are tabulated. This information is combined with the community leaders' and agency representatives' input regarding the selected trainees, the community's development plans and work force needs, and appropriate CEC programs and services developed in response. This results in establishing in-community training programs or individual referrals to outside training centres, outside adjustment services, referrals to employment, etc., depending on community needs, workers mobility, numbers of trainees, etc.

COMMUNITY NEEDS IDENTIFICATION

The counsellor through itinerant service trips and correspondence determines from community leaders, individual workers and other service agency representatives that a program is needed. Consultation with C.E.I.C. program branch and community college regarding the program delivery schedule ensues.

Program delivery approval is obtained and course start dates are established. Prospective trainees, community leaders and employers are contacted and asked to attend an "Information Session" concerning the program to be offered. Appendix II part A, provides some detail of this session.

Consultation with community leaders takes place regarding those selected for training. Arrangements are made for the course leader to have a liaison person in the community. A stand-by list of persons is made and they are also documented should fill-ins be required.

AUDIO VISUAL PRESENTATION

A slide sound presentation was developed to inform community leaders and prospective program participants about the Orientation to Employment Program during a group information session. It is intended to provide the prospective participants with enough general information to allow them to determine if the program addresses employment barriers they may be experiencing. It should also help them to determine if they are interested in participating in the program to resolve their employment problems.

Community leaders are expected to recognize the need for an adjustment program such as the Orientation to Employment and should be ready to support it as well as those attempting to change their lives by taking it.

In introducing the presentation, the counsellor informs the group of the purpose and content of the program.

POST PRESENTATION

The group should be informed of the following by the CEC counsellor and course leader:

1. Course participants can expect:
    - freedom to act as an individual
    - assistance, guidance and advice from the course leader and other participants as required
    - U.I. benefit or training allowances if eligible (give general information about pay, paydays, delays, etc.)

   - individual employment counselling and assistance from CEC counsellor at end of course or during course if required etc.
2. Course leader expects of participants:
   - attendance
   - participation
   - group harmony
   - sincere effort
   - flexibility
   - etc.
3. The community expectations:
   - the CEC representative has contacted community leaders and employers in the area informing them of the programs' purpose and of the participants attempting to do something about their lives;
   - these leaders and employers are supportive of the program and those who will complete it.
4. The CEC employment counsellor should ask if there are any questions related to the presentation.
5. The goup should be told where individual interviews are to be conducted for those seeking to enter the course.
6. Interested persons can be asked to stay after the meeting to make appointments or ask questions.

While in the community the counsellor would likely contact employers to ascertain workers' needs and obtain commitments to hire course graduates. Appropriate C.E.I.C. employer incentive programs could be discussed.

LABOUR MARKETS SESSION

At a mid-point time during the course, the course leader and the CEC counsellor arrange for a group information sharing session on "Labour Markets". A format for the session has been developed and the CEC counsellor is expected to operate it. An outline is attached as Appendix III.

COURSE TERMINATION INTERVIEWS

The CEC counsellor is expected to participate in the graduation exercises and conduct course termination interviews with each trainee. Individuals prepare action plan in the late stages of the program and these are used by the counsellor to identify remaining barriers, program and service needs. The counsellor also consults with the program leader to obtain his/her input regarding individual needs.

FOLLOW-UP

The counsellor conducts on-going follow-up with individuals regarding his/her action plan and the required services as well as responding to additional identified needs.

EVALUATION

A pre and post course assessment record is maintained for each course participant. From it the counsellor compiles a report to management on the program results. A copy of this assessment record is attached as Appendix IV.

ORIENTATION TO EMPLOYMENT

Since 1980 the course has been run in 17 locations in Northwestern Ontario. The majority of courses have been offered on semi-isolated reserves.

CURRICULUM

The course is comprised of Life Skills and employment related materials. The Native target group is non-print oriented, often reticent and shy by our standards, with an average educational level of grade seven to nine. For the Life Skills component we used PICKLE LAKE - LIFE SKILLS FOR EMPLOYMENT developed by Confederation College. It allows group members to learn and practice skills such as good listening techniques, giving and receiving feedback, assertiveness training and problem-solving techniques. The Life Skills segment also encourages a feeling of self-worth, self-confidence and trust in the group. These feelings are necessary before a participant will discuss personal problems which are barriers to employment, practice appropriate behaviours or admit and discuss difficulties he or she is having with the PLACE material and Life Skills exercises.

Also if a person views him or herself as weak and/or helpless it becomes very easy for the person to avoid a path that will sometimes be difficult or to quit when the first difficulty is encountered.

The skills and attitudes that Life Skills encourages are essential if job seeking and keeping are to be practiced.

INDEX TO CANADIAN OCCUPATIONS

The Index to Canadian Occupations was chosen to assist the students in identifying their occupational goals.

The I.C.O. allows a student:

- to pick the characteristics which describes him/her in terms of INTEREST, TEMPERAMENT, ABILITIES, PHYSICAL ACTIVITIES, ENVIRONMENTAL CONDITIONS and EDUCATION AND TRAINING ROUTES;
- to read through the occupations that match the chosen characteristics;
- to select and explore an occupation that suits him or her.

PLACE

PLACE: GUIDED STEPS TO EMPLOYMENT READINESS was chosen to provide a systematic step-by-step SELF assessment of employment readiness.

PLACE is a self-administered package designed to measure employability. It takes into account both the individual and the labour market. PLACE is a more positive counselling approach. It presents a PLAN to approach employment counselling.

The parts of PLACE are:

A - Identifying Your Occupation
B - Fitting the Requirements
C - Getting the Job
D - Doing Well on the Job
E - Personal Needs

Each part has both a workbook and sourcebook.

PLACE presents information very systematically and when it is combined with extensive use of role play related to employment provides an effective mix of print and practice.

We found however that the PLACE material had limitations when used with our target group.

The vocabulary, syntax and format were too difficult and complex. Students often had to resort to dictionaries or ask the coach for further explanation. They had difficulty in both reading the instructions and following the directions. Trainee frustration levels increased when they were required to flip back and forth between workbook and sourcebook.

PLACE also included many examples that were inappropriate for use with Native people in rural areas.

After field testing PLACE in four communities and reviewing the recommendations from the instructors, we re-evaluated PLACE. It was obvious that the PLACE material is comprehensive and contains a wealth of information enabling individuals to make informed choices about specific occupations but revisions would be required.

The decision was made to hire a Life Skills Coach with many years of experience in teaching Native communities, who had just completed an assignment as an instructor of ORIENTATION to EMPLOYMENT, to revise PLACE to suit our target group.

Revised PLACE incorporates the workbook and sourcebook for each part into one. The vocabulary and syntax are much simpler and more conversational. The examples are relevant to smaller communities which offer fewer job opportunities.

Confederation College is now in the process of field testing the revised PLACE material. The feedback from instructors and students indicates that the revisions are able to be used effectively in the semi-isolated communities in the North.

EVALUATION AND RECOMMENDATIONS

We did an intensive evaluation of the Armstrong pilot project in 1980 and the results indicated we were achieving our objectives. We learned from those evaluations what changes should be made.

The evaluation mechanism now includes the following.

EVALUATION

1) Within the context of the group the students evaluate each other, the course and the coach.
2) The coach provides a narrative report to the College which contains:
    a) overview of the community - geographical, economic, and social
    b) review of Life Skills Component
    c) review of the use of I.C.O. and PLACE
    d) weekly course outline
    e) brief progress report on each participant
    f) recommendations
3) The coach also interviews each trainee and completes the Pre and Post Assessment Form. It will serve as record of the remaining problems and action plan for use by the C.E.C. Copies of the coach's reports are forwarded to the C.E.C.

RECOMMENDATIONS

1) The course is too short. It should be extended to 12 weeks.
2) The class size 12 to 15 is workable.
3) Couples should not attend same course.
4) Attempt to screen out applicant with severe personal problems and severe alcohol and/or drug related problems.
5) The use of VTR very helpful.
6) Training allowances often arrive when course is half over.
7) Life Skills component is compatible with Native values. But participants do have difficulty with constructive criticism and conflict as potentially constructive. They do not want to make judgements. Thus there is a hesitancy and awkwardness about dealing with evaluations of progress.
8) The lack of drivers' licenses and vehicles is a very real barrier to employment on reserves within commuting distance of employment.
9) ORIENTATION TO EMPLOYMENT has been delivered in several REMOTE communities. The objectives and curriculum may need adjustment in those settings due to lack of employment and the desire of trainees to remain in their home communities.
10) The C.E.C. follow-up needs improvement. The post-course assessment interview and accompanying form have been

developed and used successfully but the long term client follow-up provides a challenge. Itinerant C.E.C. counsellors have over 200 graduates to assist. In order to effectively deal with the large numbers, it is recommended that the Community Development Officer of each Band become involved with the on-going employment counselling of graduates.

GRADUATION

Graduation is an extremely important function on the reserves in the North. The graduation feast and the ceremony provides the opportunity for trainees to:

1) Practice the following Life Skills:
    - plan and organize a community event which involves many problem solving techniques
    - arrange for location
    - decide on format - lunch, dinner, dance, etc.
    - fund raise
    - send out invitations
    - purchase and cook food
    - decorate the hall
    - arrange for guest speakers
    - prepare an agenda
2) Share their pride in their accomplishments, admit difficulties, and practice public speaking.
3) Thank group members and the community for support and express thanks to the Coach, the Band Council, the C.E.C. and the College.

Graduation allows them to share with their families (spouses, parents, children) and friends their commitment to participating in and COMPLETING a program.

The high point of the graduation is the presentation of the C.E.C. certificates by the C.E.C. representative and the College representative. We are most impressed with the changes affected in the personal development of the participants. When we meet them before the course they are often shy and do not have any ideas about what to do with their lives. At the graduation we see self-confident students who have begun to develop skills and who will have the assertiveness to ask for C.E.C. and Band involvement in carrying out their action plans.

The C.E.C. objective which is to provide people with information to make meaningful decisions concerning occupations and employment is realized through ORIENTATION TO EMPLOYMENT.

We are confident that successful completion of this training program will positively influence a more meaningful participation in the work force.

APPENDIX I

C.E.I.C. THUNDER BAY DISTRICT DEMOGRAPHICS

- The Thunder Bay C.E.I.C. district comprises Northwestern Ontario which is centrally located in Canada, bordering on Manitoba in the west and Hudson's Bay in the north. Seventy-six (76%) of the population of 236,400 persons live in urban centres which are located in a 75-mile wide industrial belt along the southern border with the U.S., that is, in the 48°th, 49°th 50°th parallel. The remaining 55,000 persons are located in the rural and remote town and villages spread throughout the remaining 175,000 square miles of the area.
- There are approximately 32,000 persons of Native ancestry, that is, Status Indians, Non-status and Metis persons. This includes approximately 23,500 Status Indians, 17,000 living on reserves. Of the total Native ancestry population:
  - 50% live in urban centres
  - 25% live in rural communities
  - 25% live in remote communities.
- There are 54 inhabited Indian reserves in the area with 30 of them being accessible only by air. There are also, many small, mixed-population communities, that is, groups of Indian and non-Indian persons, located in settlements on the highways or railways beyond daily commuting distance to any industrial employment opportunities. These latter communities are also considered remote.
- While some private enterprise in the form of tourism, fishing, trapping, retail and service takes place in the remote communities, they are dependent on government to a greater degree for income in the forms of grants for construction and other projects, allowances and subsidies. Employment ranges from almost full in the summer to 10% in the winter. Some workers travel South for 4 to 6 week periods in the spring and fall to engage in tree planting.
- The rural communities are seen as those which are located within daily commuting distance to industrial employment, including logging, sawmill, and mining operations. In both the remote and rural some retail and service business operate.
- The Native Community Employment Readiness Program, or Orientation to Employment as we call it, has been developed over the past three years in the Thunder Bay portion of the Northwestern Ontario District.
- In the Thunder Bay area there is a population of 155,000 persons, 83% urban living and 17% rural or remote living. There are an estimated 11,000 persons of native ancestry, (8% of the total population) with 1,600 living in 10 remote Indian reserves or mixed population settlements. Another 4,000 live in 24 mixed population, rural communities or reserves.

- There has been an active CEC itinerant service delivery system in the Thunder Bay District as well as a satellite adult training delivery system since 1965. Many training programs ranging from academic upgrading, equipment operating, logging, on-the-job-training, personal adjustment, etc., have been delivered over the years in the rural and remote communities through the cooperation of the communities, Confederation College and the Canada Employment Centres.

APPENDIX II

ORIENTATION TO EMPLOYMENT PROGRAM: CEC RESOURCE REQUIREMENTS

A				B			C		D
needs identification, community & college liaison, etc.	wk 1	2	3	4	5	6	7	8	9
		COURSE DURATION							
	START DATE					COMPLETION DATE			

(i) In-community "Information Session" - CEC and College reps. meet with all prospective trainees - inform them of course purpose and content (an audio/visual presentation is available to assist with this) that which is expected of trainees - attendance, participation, etc, what they can expect of the CEC and trainer, including pay process, individual assistance, etc.

(ii) Those opting for the course are interviewed, selection made, and documentation completed. Those not selected are re-interviewed and employment counselling or arrangements for it and other services are made.

(iii) The community's employers are to be contacted and informed about the program. Their co-operation to support graduates thru job training programs is solicited. Estimated: 2 counsellors x 2 days + travel time and costs.

During course "Labour Markets Session" by CEC counsellor plus individual interviews as required (session is approx. 3h) Estimated: 1 counsellor x 2 days + travel time and costs.

Just prior to course completion CEC counsellor provides individual interviews to identify and record client's objective and any remaining employment barriers, plus vocational development plan, and plan of action or arrange for out-of-community special counselling or services, i.e. testing services, special CEC counselling, diagnostic training etc, also to participate in graduation exercises. Estimated: 1 counsellor x 2 days + travel time and costs + in-CEC counselling time.

On-going CEC counsellor follow-up re action plan completion to deliver employment services and respond to additional identified needs as required.

Total estimated CEC resource commitment after course purchase is 8 employment counsellor days plus travel time and costs.

APPENDIX III

GROUP INFORMATION SHARING SESSION OUTLINE

Preparatory:

At least 2 weeks prior to the session the Employment Counsellor is to contact the course leader and arrange to have each trainee make a presentation regarding their past participation in the labour force.

Each trainee will briefly describe jobs they have had and include:

(i) Where or from whom did they learn there was a job?
(ii) How did they apply for it - to whom did they apply?
(iii) What was the occupation (2 words minimum)?
(iv) What work did they do?
(v) Conditions - pay, hours, clothes and tools needed etc.
(vi) Duration - seasonal, steady?
(vii) Why do they think they got the job?
(viii) Good things about it.
(ix) Not so good things about it.
(x) Advice for someone wanting a similar job - how and where to apply, training and/or experience which would help.
(xi) Problems they have had in the past in finding work.

The course trainer should ensure that each person has a presentation prepared.

The counsellor chairs the session.

INTRODUCTION:

Session Objectives - to obtain information about local and outside jobs, as well as those things influencing getting and keeping a job.

The Labour Market - what it is and how it operates.
- what are employers buying and workers selling?
- local markets and outside markets.

Individual Presentations - course leader can operate this.
- counsellor ensure concreteness from presenters, prepare summary of group experiences.

Local Markets - from presentations and group input list local jobs and how to get them, make points re help from others in job search, need to commute, follow-up, etc.

Outside Markets - solicit groups experience in outside jobs. Expand from own knowledge.

Where to Look for leads

Problem Solving

Learned Helplessness

CEIC Programs and Services

Role of the CEC Employment Counsellor

Closing remarks - arrangements for individual interviews

APPENDIX IV

COACH & COUNSELLOR'S CLIENT PRE & POST COURSE ASSESSMENT RECORD

CLIENT'S NAME: ________________ S.I.N. ________________ HOME COMMUNITY: ________________
OCCUPATION(S): ________________ DATE ________________
COACH OR COUNSELLOR'S NAME: ________________ OFFICE: ________________

PRE COURSE	POST COURSE	CLIENT'S REMAINING PROBLEM AREAS	SOLUTION(S) TO PROBLEMS	ACTION PLAN/WHAT, WHERE, WHEN, WHO	CLIENT'S DEVELOPMENT DURING COURSE
		1. Has no specific a) Primary Occupation Chosen b) Secondary Occupation Chosen			
		2. Lacks Occupational Qualifications			
		3. Needs to Improve Job Search Skills			
		4. Needs to Improve Job Keeping Skills			
		5. No jobs Locally - Mobile			
		6. No jobs Locally - Not Mobile			
		7. Personal Situation Interfering Specify:			
		8. Other - Specify			

REFERALS TO: PROGRAMS, SERVICES, EMPLOYERS, AGENCIES	REASONS	RESULTS	OTHER REMARKS

APPENDIX V

ORIENTATION TO EMPLOYMENT

Overall Objectives

1. To provide local workers with the information needed to allow them to assess the opportunities of the labour market, understand themselves in terms of their abilities, aptitudes, temperaments, and interests, and explain the consequences of making choices regarding occupations and the stay-or-go option so that the workers may make an informed choice about what they want to do with their lives.
2. The College is to ensure that the perception of the community is that the CEC provided these services and assistance.

BASIC MODULE #1: 9 weeks duration

Week 1 - Orientation

Introductions
Outline Rules
Introducing and Identifying Life Skills
What Do I Want From This Course
Introduce and Set Up VTR (each person teaches another)
Identifying Personal Goals
Listening Skills
Asking Questions
Introduction to Groups (consensus)
Ten Persons I Am

Week 2

Identifying Feelings
Role Play - Interpersonal Communications
Feedback
Addressing an Audience
Identifying Trust
VTR - Making a Speech
Helpful and Harmful Group Behaviours
Introduce I.C.O. and Complete Steps in Using C.C.D.O.
Introduction to PLACE
Guest Speaker: O.P.P. Native Constable

Week 3

Assumption or Fact
Building Trust
Self-Portraits
Leading and Following
Values Clarification
Introduction to Assertiveness

- Decision Making in Daily Life
- Obstacles in Reaching Goals
- PLACE PART A: Identifying Your Occupational Goal
- PLACE PART B: Fitting the Requirements of the Occupation
- Physical Requirements of the Occupation
- Skills Required
- Credentials Required
- Necessary Tools, Equipment, Vehicle, and Clothing Required
- Guest Speaker - Chief and Community Development Officer

Week 4

- Assertiveness - Bill of Rights
- Preparation for GIS on Labour Market
- Identifying Marketable and Non-Marketable Skills
- Problem Solving
- Constructive Criticism
- Preparation and Decision Making for Fund Raising for Graduation
- Planning Agency Day or Family and Friends Open House
- Review and Evaluation of Progress - first 4 weeks
- PLACE PART C: Getting a Job
- Telephone Skills
- Résumés and Letters of Application
- Application Forms
- Interview of VTR
- Public Speaking
- GIS on Labour Market - CEC Representative

Week 5

- Assertiveness - Role Plays
- Evaluating Behaviours
- Discrimination
- Coping with Fear, Anxiety and Stress
- Solving Own Personal Problems
- PLACE PART C: Getting a Job (continued)
- Family and Friends Open House or Agency Day
- Guest Speaker - Confederation College Representative

Week 6

- Dealing With Anger
- Fighting Fairly
- Alcohol and Drug Abuse
- Human Relations Skills
- Working and Living in a Changing World
- Assertiveness
- PLACE PART D: Doing Well on the Job
- Identifying Strengths For Dealing With Change
- Interpersonal Relationships with Co-Workers
- Guest Speaker: Native Alcohol Counsellor

Week 7

Personal Appearance
Punctuality
Company Policies
Work Standards
Showing Initiative
PLACE PART D: Doing Well On The Job (continued)
Alibis
Self Esteem
Mock Board Interviews
Guest Speakers: Employers From Area

Week 8

Budgeting
Life Goals
Community Alternatives
PLACE PART E: Personal Needs
Care of Dependents
Health
Physical Limitations
Legal Problems
Guest Speakers: Public Health Nurse or Community Health Worker
Native Legal Clinic Representative

Week 9

Review Goals
Plan Speeches for Graduation
Housing
Transportation
PLACE PART E: Personal needs (continued)
Review Personal Problem Solving
Personal Positive Notes
Preparation for Graduation
Evaluations - course
group
group members
coach
Personal Interview with CEC Representative - Post course assessment
Personal Interview and Evaluation with Coach

EXTENSION MODULE #2: 2 weeks duration

For those trainees requiring additional development of the following Basic Life Skills as preparation for competing in the Job Market. Particularly those who will be seeking jobs which require periodic living away from home.

Urban Living

Competition
Problem Solving
Step by Step Approach to Problem Solving
Solving Personal Problems
Helping Others to Solve Problems
Achieving Goals

Exploring the Urban Environment - Your Well Being

Values Clarification
Utilizing Community Agencies and Resources
Self-Reliance
Mental Health
Leisure Time

EXTENSION MODULE #3: 1 week duration

For the trainees requiring more extensive Job Search Training than that obtained in the "Getting a Job" component:

Working At Getting A Job

- How local people get jobs
- Learning where job openings are
- Practice making applications - telephone in person and written
- making calls - buddy monitoring and checklists
- Getting transportation for interviews
- Scheduling class and follow-up
- Review of "Doing Well On The Job" and "Personal Needs"

The basic course purchase will be for 9 weeks. The College will request extensions of the course in modules 2 and/or 3 for those trainees requiring them. This will be done in ample time to permit training to continue with no interruptions.

STUDIES IN LIFE SKILLS - TWO UNLIKE GROUPS*

Joan Hearn, Career Counselling and Development Officer
Employment and Immigration Canada

During the past year the Canada Employment and Immigration Commision has undertaken to design Life Skills lessons for two very different groups. One of them, non-job-ready Canada Employment Centre clients, falls easily within the "traditional" target population for Life Skills, but the other, refugees in Canada, does not. All experience is useful, however, and studying the needs of refugees proved exceptionally so, because working out the goals and objectives for these unusual subjects threw a good deal of light on the sorts of goals and objectives which are possible for non-job ready clients, employment-disadvantaged youth, welfare mothers or any of the more customary target populations. The purpose of this article is to share some of the observations and conclusions formed as a result of working on behalf of these two groups, in which insights achieved with one helped to illuminate the other.

Refugees come to Canada from all over the world and Canadians are proud that this is the case. When it came to getting a "fix" on the needs of this target population, however, there were significant problems. There is no immediate apparent way of uniting people whose cultural and background differences are literally as wide as the world. Newness in Canada is the one experience they share. Canadian values and a few of the behaviours that reflect them became the inevitable focus of effort.

This was not an easy decision to take. In the first place, Canada's official policy is one of multiculturalism. Article 17 of the Canadian Charter of Rights and Freedoms (The Canadian Constitution 1981, p. 10) states: "This Charter shall be interpreted in a manner consistent with the preservation and enhancement of the multicultural heritage of Canadians". There is not now, and there has never been, any anticipation that new Canadians will participate in some kind of misty or mystical national ideal. The fundamental idea is that they are perfectly OK and have a lot to offer just the way they are. Probably most Canadians support this idea. The differences add richness to national life and, often, to individual lives. Without undertaking to speak for the entire country, a good guess would be that if there is one value Canadians share, it is, "Thou shalt not shove thy values down someone else's throat."

Over against this is the more or less incontrovertible fact that there are, in Canada, certain kinds of things that are done, ways of behaving in public, ways of dealing with difficulties and problems that are a reflection of values that are widely held in this country. It seems only decent to describe them to newcomers. It seems fair to try to protect refugees from indulging in behaviours which might provoke the open hostility of already-established Canadians. Canadians are not perfect people, a fact the lessons emphasize, and these kinds of incidents cannot be other than degrading. It seems legitimate to want to prevent newcomers from getting into hassles with the police and their neighbours because, again, these sorts of incidents breed hatred and anxiety and paranoia. It seems necessary for them to understand some of the principles of working in Canada because they may be different from those in their country of origin. The decision was taken to tell them in order to make life more predictable.

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In the end, the justification for choosing to explain Canadian values came from inferences about the needs of the refugees themselves. There is a sense in which refugees are extremely successful people but for this success, the price is very high. Refugees are not immigrants in the usual sense of the word. Immigrants choose Canada, they plan to come here; if they really hate it they can go back. Even if they loved it, they can make reassuring visits to their country of origin. In the case of refugees - particularly South East Asian refugees - it was by no means clear that Canada was ever the first choice - and given their situation one might assume an any-port-in-the-storm attitude. Their mental state on reaching our country is not ideal. Dr. San Duy Nguyen, a psychiatrist at the Royal Ottawa Hospital in an article entitled: The psycho-social adjustment and the mental health needs of South East Asian refugees states that refugees most often make a good adjustment but points out: "a significant number of them are experiencing considerable emotional distress due to the traumas of the war, the lack of preparation before leaving their homelands, the perilous escape, the protracted stay in over-crowded unsanitary refugee camps, and the transplantation into an alien culture and environment. The most frequent mental health problems among those refugees are: depression, anxiety, marital conflict, intergenerational conflict, psycho-somatic illness and psychosis" (Nguyen, 1980, p. 26). These particular refugees were welcomed - more often than not - by warm-hearted Canadians whose most sinister desire was to make friends. These are precisely the qualities that the refugees have frequently learned to distrust, and it is often the case that many of our values, such as friendliness, openness and being neighbourly which, one might argue, spring directly from the rigours of our pioneer background, are simply not survival values in the cultures from which they come. So whatever the hesitations, it seemed that teaching refugees about Canadian values would be one way of lowering pretty intolerable levels of anxiety, a way in which the "alien culture" might be rendered less alien.

The biggest concern was about forcing or foisting these values. It is important to reflect that while refugees arrive in our country in pathetic condition: usually penniless, often in a state of severe physical exhaustion, and burdened with intolerable anxiety, given the conditions they have survived, they are highly successful people. The choices they have made along the way have been made on the basis of survival and escape. Others of them may have had other criteria but it is arguable whether these people ever arrive in Canada, possibly they did not make it through immigration procedures, possibly they have ended up in re-education projects or concentration camps or, very possibly they are dead. The people who have reached this country have chosen and they have chosen right and they have received powerful reinforcement for having chosen the way they did. As Winston Churchill remarked somewhere: "There is nothing so exhilarating as having been shot at and missed!" They are a group defined by their choices and the choices have been made on the basis of harsh criteria. Under the circumstances, it seems a little over-genteel to worry about forcing Canadian values upon them. It is possible to describe Canadian ideals and principles but these students are well able to choose whether or not they wish to subscribe to them.

It is reasonable to think of refugees in some ways as suffering from anxiety and drepression arising, in part, from ignorance of the Canadian value system. In many cases they can be characterized as survivors - with the understanding that one does not always survive by paying faultless attention to what is written in the small print. And so while they are choosers par excellence they do not always possess an acceptable basis for making a choice once they are in Canada.

And in this way, of course, they resemble many traditional Life Skills students who do not choose - or anyway prefer to think they are not choosing - and whose outstanding deficit appears to be an inability to link cause with effect, in other words, an inability to foresee the outcomes of their actions. Ralph Himsl (1973) gives a very apt description of the disabilities of Canadian Life Skills students:

> Study of the literature, and direct observation reveal that many disadvantaged have a complex, interlocking set of inadequate behaviours. Some lack the skills needed to identify problems, to recognize and organize relevant information, to describe reasonable courses of action and to foresee the consequences. They often fail to act on a rationally identified course of action, submitting rather to actions based on emotion or authority. Often they do not benefit from experience since they do not evaluate the results of their actions once taken, and display fatalistic rationalizations of their consequences (p. 13).

Both groups are alike, therefore, in appearing to lack any rational basis for making a choice. Dana Mullen (1982) adds the *mot juste* with the well-founded observation: "To paraphrase Shakespeare, when problems come they come not single spies but in battalions" (p. 5).

A clarification is necessary at this point to explain that in order to flesh out this idea, the discussion that follows will concentrate on the characteristics of criminal offenders. In selecting them for purposes of illustration no slander is intended to the vast majority of Life Skills students who whould not think of committing a dishonest act - and yet who still suffer anxiety and drepression, and who indulge in equally pointless, if less reprehensive, behaviours because they see themselves as helpless. Discussion of this group suggests itself because the actions of criminals define them - or perhaps it would be more honest to say that their convictions define them - as failing to function acceptably in our society, in contrast to the manner in which the choices refugees have made define them as having functioned very successfully. (With everyone else milling around somewhere in between).

To state that the behaviour of many offenders shows clearly that they are not able to foresee the consequences of their actions is to state a commonplace. In a report, *Improving practical reasoning: Moral Education in Corrections, Phase One*, (Wright, Coombs, La Bar and Lloyd, 1980) the authors hypothesize: "Prisoners will tend not to gather relevant information and weight the pros and cons of a course of action. They think they have all the information they need ... Prisoners will tend to be closed-minded. They will not listen to evidence which contradicts what they already believe" (p. 12). Ross and Fabiano (1983) in one of their recent publications concern themselves with the same deficit when they suggest that offenders "fail to consider the consequences of their behavior before they act" (pp. 8 and 9).

In brief: they have no way of associating cause with effect, they are unable to predict the outcomes of their actions and this is particularly the case in their relations with other people and with society as a whole.

The same characteristics can be noted in many other Life Skills students and coaches will recognize them: the failure to understand, to realize there is an alternative to what they do, and the unrealistic expectations - of themselves and other people.

It is fundamental that you do not knowingly do anything to hurt other people - one may safely say that without getting a ruling from the Supreme Court of Canada - so that an important basis for prediction is an ability to understand the thoughts and feelings of other people, to put yourself in their shoes. People new to this country are unable to understand our thoughts and feelings quite simply because our values are different. Canada and Canadians mystify them. It has been noted at length that offenders also are unable to make the jump where you put yourself in someone else's shoes and this is a serious deficit precisely because it is the basis of moral judgements. It is also the basis for choosing any course of action which involves other people. So that this deficit does not result only in criminal prosecution, nor does it confine itself to people who break the law. Workers in Life Skills daily confront the difficulties of people who do not or cannot imagine what is in the mind of the manager who interviews them for a job, of the supervisor who corrects their work, or of loan companies who are willing to extend them credit.

Once again, neither group has any rational basis for making a choice.

Passive and defeatist attitudes have been noted in Canadian Life Skills students (Himsl, 1973, p. 13). Not surprisingly this attitude results in a conglomeration of non-welfare emotions: high levels of anxiety and more or less chronic depression, for example. This is a tendency also documented by Lefcourt in his book on locus of control (Lefcourt, 1976, p. 86). It is sensible to assume the existence of the usual concomitants: irritability and anger. Concurrent with feelings of helplessness is a tendency to seize events by the throat, to indulge in highly impulsive behaviour. This tendency has been established by E.J. Phares (cited in Lefcourt, 1976, p. 32) who carried out a number of studies in which chance-instructed subjects, that is, subjects for whom the results of performance are perceived as merely random occurences (as opposed to subjects for whom the results of performance are perceived as predictable) are more likely to make "unusual shifts". Or, to put it another way: are more likely to behave in a manner similar to that of a gambler. This behaviour may vary from impulse buying to irrational acts of violence. The results are predictable societal mishaps: debt, addiction, broken relationships and prison, to name a few.

Refugees, in contrast, are active rather than passive and, far from being defeatist, are indomitable. And yet, to be a refugee is one of the greatest societal mishaps that can occur in a human life. The act of fleeing from one's own country may be realistic, but usually it is made under conditions of terror or panic which preclude thought. These are the people who take the last train or escape across the roof tops, who swim the Mekong, cling to the wings of airplanes or pay gold for passage standing up in a leaky boat. Liu, Lamanna and Murata (1979) quote several refugees from Vietnam: "I saw everyone running to the harbour, so I decided to go along" (p. 19), "Did not know I was leaving Vietnam but boarded ship with the thought only of running away from the shelling" (p. 33) or, quintessentially, "We did not plan on making this trip" (p. 19). Even if there is a sense in which they have made a "right" decision, they must pay a price they had not anticipated.

> The pain that hurts the most and will not be conquered easily or very soon, the biggest obstacle to joy or happiness or just to normal life, is the feeling of fear and strangeness, of loneliness and helplessness when one is lost in an alien, unfamiliar world in which one has to live and adjust from now on. This had been of course, something they tacitly submitted to since the first day they left the homeland, a nominal price to pay although they did not realize how high this price would be. And now, beyond the point of no return and for the sake of survival, they will have to see it through. Tung (cited in Liu et al., 1979, p. 40).

So here are two disparate groups who share some important characteristics: prone to anxiety and depression, an evidence, in both cases, of impulsive behaviour, without the ability to understand or put themselves in the position of the people around them and lacking any realistic criteria for making choices. So it is possible to ask: why not use the same lessons for both groups? The reason why not is that the shared characteristics are in each case functions of different needs and it is these needs that Life Skills seeks in some measure to supply.

In the case of refugees, the gap is due largely to ignorance and can be filled with information which may be provided a straightforward way; they can choose to take it or leave it. In the case of the all-Canadian Life Skills students often the substance of what is taught to them is not different but in these cases it is important for students to understand these skills as a function of choices they make. Choice is an abstract, of course, with little meaning apart from situations in which it is necessary. And so the aim is to encourage the development of choosing by giving practice with specific, manageable, interpersonal behaviours, by means of Life Skills lessons in short.

And this is where the study of the first group causes serious question about what is being taught to the second. Do Life Skills, in fact, also teach values to Canadians? There are people who insist that values are what Life Skills should be teaching.

In 1982, Ken Autletta's book The Underclass was published. This is amongst other things, an inquiry into the proper role of government with respect to disadvantaged groups in American society. Auletta quotes the Coach of a Life Skills group in stating that his first priority would be a program to teach morals or ethics "...I see that as far more effective than dumping millions of dollars. That's what Johnson's Great Society did by dumping all that money into teaching 'marketable skills'. A lot of those people got those marketable skills and they're still out there. Skills are important. An ability to read and write is important. But ethics is key." (Auletta, 1982, p. 294).

But, as someone once said of the writings of Saint Paul, this is after all only one man's opinion. The fact remains that Life Skills are largely interpersonal skills and that interpersonal skills by definition must be based on the recognition of a shared humanity. They are skills which cannot reasonably be taught from a unilateral point of view - they do imply a knowledge of how other people think and feel and may choose. Life Skills are not and cannot be simply a series of mindless tricks for getting ahead and outwitting other people. Neat tricks vitiate choice and therefore they de-humanize the person who practises them and the person upon whom they are practised. Life Skills are problem-solving behaviours, the practice of a reasoned and reasonable choice, that is true, but the data-base for solving interpersonal problems is a knowledge of the needs and emotions of other people, co-existing with your own, and a recognition that everyone, including yourself, is a unique and valuable individual. If these sentences sound very moral and value-laden - and they are certainly open to this accusation - then so be it. On the other hand, trying as hard as possible to be amoral and valueless, it is difficult to imagine any other reasonable and enduring data-base upon which to teach inter-personal, problem-solving skills.

The next serious question is: if the discipline of Life Skills is encouraging students to make choices, is it asking them to make middle class choices? Do Life Skills teach middle-class values? Another dismaying question.

People who go "way back" in counselling and social work were taught that middle-class values were a kind of disgraceful part of their personalities, to be kept decently hidden from the poorer clients. This was very likely, because the middle-class has been associated with a dour and joyless puritanism whereas the more laid-back attitude of the lower classes is associated - at least by sentimentalists - with simple, uncomplicated happiness and joie de vivre. Anyone who has worked with the poor knows that this is, to say the least, not the case. "Blessed are the poor" but do they know it?

It is true that our society, which is essentially middle-class, has been accused of being obsessed with money although there is little evidence that people who do not have it or people who have a lot of it, worry or dream about it less than do the middle-class.

But to approach this question differently, consider the options: on the one hand, it seems quixotic to teach people how to be poor, and in any case this is not a lesson most Life Skills students need; on the other hand, if there are people who know how to teach other people to be rich, Wall Street would present more fertile ground than Life Skills. It would appear that the only alternative is to teach people how to be middle-class and given North-American love-hate feelings about money, this is worrying to contemplate.

Reflection suggests that if it were possible to factor out all the guilty financial preoccupations, attitudes and values would emerge which do occur frequently, attended by success and without guilt, in societies where the accumulation of wealth is not a primary goal. Even in so-called "primitive" societies, the prize goes most often to the hunters who take the most care in preparing their weapons, who track their prey most assiduously, who plan and co-operate with each other in the hunt. In other contemporary societies, alike in not being dedicated to the profit motive, success may depend on a certain competence in dealing with the bureaucracy. The strong suggestion is that this know-how is the great middle-class virtue which cuts across all societies - including those which prefer to lay up treasures on earth rather than in heaven - that it is practical everyday problem-solving to be put at the service of whatever goals or morality people may have in mind. In this sense, it is as desirable for a Canadian Life Skills student to learn how to behave in a job interview, as it is for an Amazonian tribesman to learn how to poison a dart or for a young Kazak to understand how to become a member of the Communist party. In other words, it is desirable to teach some kinds of middle-class problem-solving although recourse to grizzly Victorian moral precepts and quantities of Barry Manilow records may not be inevitable.

So, to recapitulate, it is certainly possible to say Life Skills teach values and, indeed, it is arguable that, whatever one's intentions, it is possible to avoid teaching values of some kind. Let us hope that the values Life Skills teach are based in a sane view of our common human nature, a rational view of problem-solving and a responsible view of choice. But even if someone should criticize these values claiming that they are in some way undesirable, reprehensible or downright immoral, they are still justifiable on the grounds that they are the means by which balanced self-determinism might be achieved.

Put this way, the goals are inoffensive but they are difficult to teach. Life Skills lessons should be experiential and this means, of course, more than that the students should not be unconscious at the time the lesson is given. There must be a high rate of active student involvement whether this is in the form of discussion, role playing, practice or application.

The concern is that the lesson experience, especially the part where the students test out the specific skill, is a very second-rate substitute for the real thing. But it is at once the advantage and the disadvantge of the lesson situation that it is not real life. The vexation is that it is not possible to bring little slices of real life into the classroom for students to work on and possibly mess up, the way pieces of wood are used in woodwork, or old motors in auto mechanics. People involved in Life Skills have this worry even though experience teaches that random slices of life cannot be guaranteed to be typical or, anyway, not typical of the kinds of situations needed, that day, for practice. Even so, it has always been a matter for regret that lessons, like art, merely imitate life.

The advantage is that these contrived activities and exercises do permit that an evaluation of how well the skills were performed take place. And this step is even more important if everything went wrong than if it went right. Because certainly it is important to know, that if you did not do it right, you can try again; in other words, that you can learn.

This stage of problem-solving and of the Life Skills lessons assumes true value when the experience arranged for all-Canadian students is compared with the experience of the other group, the refugees. Life has not offered them the opportunity to evaluate, life has only offered success or failure. No particular gift is required to perceive that for the many, many of them, who have ended up in prison, in concentration camps or who have died, the experience has not been with life, where there are mistakes as well as possibilities, but with death, where there is neither.

Because what is it, after all, that Life Skills coaches hope for their students? Balanced self-determinism? Of course; that is one of those things it is hard to be against. It is an ideal in which every virtue resides so that is probably why; even though it is good, it does not sound very appealing. The virtue is that it makes clear that responsibility for choosing rests with every one of us and we do have input into what happens to us. The difficulty with this expression - and certainly this difficulty did also occur to the originators - is that it skims over the possibility, that one may choose wrong. Because, of course, that possibility is implicit in the act of choosing.

So it is not some technique for making unfailingly correct choices which Life Skills tries to teach - surely a great relief to everyone in the field. It is the daunting and dangerous area where human beings encounter choice that is the proper focus of Life Skills.

There is a very appropriate passage from the Book of Deuteronomy in which God is recorded as speaking to the children of Israel. God says: "I have set before you life and death...therefore choose life." (Deut. 30:19). To live is to choose. And it is surely living that Life Skills teach.

REFERENCES

Auletta, K. The Underclass. New York: Random House, 1982.

Bible. Authorized version. Deuteronomy.

The Canadian Constitution, 1981. A resolution adopted by the Parliament of Canada, December, 1981. Publications Canada, Box 1986, Station B, Ottawa, Canada K1P 6G6.

Himsl, R. Life Skills: A course in applied problem-solving. In Readings in Life Skills. Prince Albert, Saskatchewan: Saskatchewan Newstart Incorporated, Training Research and Development Station, 1973.

Lefcourt, H.M. *Locus of control.* Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1976.

Liu, W.T., Lamanna, M., Murata, A. *Transition to nowhere: Vietnamese refugees in America.* Nashville, Tennessee: Charter House Publishers, Inc., 1979.

Mullen, D. *A conceptual framework for the Life Skills program.* Occupational and Career Analysis and Development Branch, Employment and Immigration Canada, 1982.

Nguyen, S.D. The psycho-social adjustment and the mental health needs of South East Asian refugees. *The Psychiatric Journal of the University of Ottawa*, 1981, *7*, 26-35.

REFERENCE NOTES

Ross, R.R., Fabiano, E. *The cognitive model of crime and delinquency prevention and rehabilitation: II Intervention techniques.* Report written for the Planning and Research Branch, Ministry of Correctional Services, Ontario, July, 1983. Mimeo.

Wright, I., Coombs, J., La Bar, C., and Lloyd, A. *Improving practical reasoning: moral education in corrections, Phase one.* Report submitted to the Association for Values Education and Research, Faculty of Education, University of British Columbia, 1980. Mimeo.

VOCATIONAL REHABILITATION

John Carroll
John Boyd
Paul Nolis
Chuck G. Brownell
Workers' Compensation Board

INTRODUCTORY OVERVIEW

Welcome to the workshop entitled, "Vocational Rehabilitation - A Closer Look". This label is appropriate, as the session will endeavour to explore, in greater detail, the Vocational Rehabilitation Program and services offered by the Ontario Workers' Compensation Board that were described by Mr. Art Darnbrough in the plenary session. My name is John Carroll, and I am the Divisional Co-ordinator of the Vocational Rehabilitation Division. I would like to introduce the three gentlemen who are joining with me in the panel; Mr. John Boyd, Director, Vocational Counselling Branch, Mr. Paul Nolis, Director, Rehabilitation Resources Branch, and Mr. Chuck Brownell, Manager, Employment Services.

WORKSHOP OBJECTIVES

What we intend to do is to address the following topic areas:

- Legislated Mandate
- Objectives
- Philosophy
- Eligibility
- Service Data
- Operational Detail
- Community Involvement
- Future Challenges
- Summary
- Question (Feedback) Period

While we have specifically set aside a time for a formal question period, we encourage you to ask your questions as we go along.

LEGISLATED MANDATE

The Workers' Compensation Board in Ontario operates under formal Provincial Legislation; the Workers' Compensation Act. As Mr. Darnbrough indicated earlier, the Ontario format is typical of other such programs in Canada, but may differ somewhat in application from Vocational Rehabilitation Services in other provinces. In this light, let us look very briefly at the legislation that provides for Vocational Rehabilitation at the Ontario Board.

It is Section 54 of the Workers' Compensation Act that gives rise to the provision of Vocational Rehabilitation

Services. Essentially, the legislation states: "To aid in getting injured employees back to work and to assist in lessening or removing any handicap resulting from their injuries, the Board may take such measures and make such expenditures as it may deem necessary or expedient".

It is significant to note the generality of this language. In fact, this broad statement has enabled the Board to provide a wide range of special programs and services, which we will be looking at a little later, this afternoon. Today, our services are provided province-wide, from the Board's Head Office in Toronto, its Hospital and Rehabilitation Centre in Downsview (a Toronto suburb), and from a number of area and regional offices.

OBJECTIVES

There are three primary objectives that underlie the Vocational Rehabilitation Program at the Ontario Board:

1. to facilitate the return of industrially injured persons to employment;
2. to provide specialized resource/consultative services to expedite the injured worker's return to employment;
3. to actively pursue and secure employment opportunities for injured workers.

PHILOSOPHY

Choosing a career is difficult, especially in today's economic climate. But the choice for one who has experienced the trauma of a disabling accident is compounded. Employment choices are based upon personal interests, aptitudes, physical abilities, prevailing labour conditions, regional employment prospects, and the results of vocational testing. At the Workers' Compensation Board, our rehabilitation philosophy is based on the "total person" concept. Our ultimate goal is the job for the person. In this sense, abilities are stressed and become the focal point for service, not diabilities.

ELIGIBILITY

Recommendations and requests for Vocational Rehabilitation Service come from a variety of sources:

1. The Board's "Claims Services Division"
2. Medical Services Division
3. The Board's "Appeal Area"
4. Casual visitors to Board Offices
5. M.P.P."s, advocacy groups, family members and other interested parties.

When we are made aware of an individual's situation, it is investigated to evaluate the worker's need for service and to determine whether he or she is eligible. For those who are deemed eligible, we initiate service by referring the particulars of the worker's situation to one of our rehabilitation counsellors. We term this as a "referral".

Generally speaking, eligibility is assessed in three broad categories:

1. The injured worker who has a compensable disabling condition and cannot return to the usual pre-accident occupation.
2. The worker in a working environment where there is a risk of an industrial disease who is advised to consider alternative employment.
   - This is what we refer to as "preventative rehabilitation". Services may be provided to those suffering from asbestosis, silicosis and other similar conditions. We provide assistance in seeking alternative employment under the "Special Rehabilitation Assistance Program".
3. The injured worker who may suffer a recurrence or aggravation of disability if pre-accident duties are resumed.
   - It may be within a person's capabilities to return to their normal job, but the medical opinion suggests that such a move may inevitably result in a recurrence or aggravation of the disability. A good example of this type of situation would include skin diseases such as dermatitis.

The Ontario Workers' Compensation Board operates under Inter-Provincial agreements with the other Boards and Commissions in Canada. These arrangements enable us to provide service to workers injured in other provinces who relocate to Ontario, and vice-versa.

SERVICE DATA

Statistical data is, very often, confusing and, at times, meaningless to the "uninitiated". It is helpful, though, in placing in some perspective the service volumes of the area under review. To this end, we wish to share with you just a few figures that will help you "get a feel" for the magnitude of our work.

"Section 54" expenditures encompass a variety of direct service costs incurred in the provision of our services for injured workers. These charges do not include our administrative or operating costs. Essentially, "Section 54" expenditures may be categorized as follows:

1. Agency Payments:
   - for evaluations, assessments, training, etc.

2. Maintenance Payments:
   - for payment of benefit entitlement to a worker on program
3. Other Payments:
   - for transportation, room and board, rehabilitation aids, vehicle, home or workplace modifications, etc.

VOCATIONAL REHABILITATION DIVISION
1983 SERVICE DATA

REFERRALS FOR SERVICE		8,126
SERVICE CLOSURES	: Rehabilitated	3,981
	: No Further Action Indicated	3,741
	TOTAL:	7,722
JOB OPPORTUNITIES	: Obtained	4,237
	: Utilized	1,372
COMMUTATIONS	: Requested	1,651
	: Granted	462
ASSESSMENTS	:	3,302
TRAINING PROGRAMS	:	2,400
EXPENDITURES (Section 54)	:	$19,831,484.06

ORGANIZATION OVERVIEW

Within the Vocational Rehabilitation Division there are four operative sections: the Vocational Counselling Branch, the Rehabilitation Resources Branch, Employment Services, and Policy and Review Services. Throughout the Province of Ontario, there are a total of 307 persons involved in the provision of vocational rehabilitation services.

These staff are distributed as follows:

• Divisional Management	4
• Vocational Counselling Branch	122
• Rehabilitation Resources Branch	121
• Employment Services	30
• Policy & Review Services	6
• Regional Operations	24

OPERATIONAL DETAIL

1. Vocational Counselling Branch:
   - Introduction of Mr. J.B. Boyd, Director
2. Rehabilitation Resources Branch:
   - Introduction of Mr. P. Nolis, Director

3. Employment Services:
   - Introduction of Mr. C.G. Brownell, Manager.
4. Policy & Review Services:
   - To review and render judgement on all adverse decisions made by members of the Division's staff.
   - The majority of their reviews relate to commutation requests (approximately 75% of the section's workload in 1983).
   - Through their review of adverse decisions, the division is afforded a means of quality control, thereby ensuring consistency of decision making.
   - Vocational Rehabilitation policy research and development also falls within the purview of this group.

VOCATIONAL COUNSELLING (J. B. Boyd)

It is my pleasure to provide you with an overview of the Vocational Counselling Branch.

Within the Workers' Compensation Board of Ontario, we are one of four major operating areas within the Board's Vocational Rehabilitation Division.

Historically, the Ontario Board has always been a strong supporter and practitioner of "The Total Person Concept".

For the past sixty years, the provision of vocational rehabilitation services has been a major component of the Ontario compensation system.

The Ontario Act, as amended in 1924, provides the mandate for vocational rehabilitation. In keeping with this legislation, and where the established criteria is met, the following services are available.

SERVICES PROVIDED

1. Vocational Counselling:
   - To assist the worker in identifying a realistic career path on the basis of interests, experience, aptitude, ability and personality factors.
2. Social Counselling:
   - The assessment and treatment of personal and social problems which hinder the rehabilitation process.
3. Supportive Counselling:
   - The formation of a relationship with the injured worker early in the recuperative process in order to monitor and assist in adjustment to and acceptance of the disability or condition.
4. Financial Counselling:
   - The provision of specialized counselling relevant to budgeting, credit counselling, e.g.,

foreclosure, repossession, debts, etc., in addition to commutation and/or long-term pension advance investigations.

5. Employment Counselling:
    - To assist the worker in identifying and utilizing determined abilities to the maximum and preparation for job interview.
6. Vocational Evaluation:
    - The identification and measurement of a worker's interests, aptitudes, learning potential and personality traits through various forms of testing.
7. Agency Assessment:
    - The measurement of a worker's physical and mental tolerances in a controlled environment.
8. Industrial Assessment:
    - The arrangement of trial placement with an employer to ascertain worker-job compatibility.
9. Formal Training-Academic:
    - The method utilized to upgrade the worker's academic level and enhance employability.
10. Technical, Skill or Trades Training:
    - The acquisition of theoretical knowledge and practical skills in a recognized institute of learning.
11. Training-On-The-Job:
    - The means of acquiring alternate marketable skills leading to employment on a cost-sharing basis.
12. Job Analysis:
    - The determination of the physical and educational requirements of a specific occupation through on-site evaluation.
13. Selective Job Placement:
    - The matching of an individual worker's skills, interests and abilities to specific job opportunities.
14. Rehabilitation Aids:
    - The payment for the provision, and/or replacement of special needs, employment and/or hobby/sports related.

DEFINITION OF REHABILITATION

The term rehabilitation is used generally to include the cultivation, restoration and conservation of human resources, involving the use of all appropriate sciences and disciplines to help persons handicapped by disease, disability or social maladjustment.

SERVICE NEEDS

Successful rehabilitation is accomplished only with the worker's co-operation and that of treatment personnel, health and welfare services, industry, the community and the worker's friends and family. It is a group effort.

Serious injury frequently changes the entire life style of an individual, requiring major adjustments in daily living and social activity. The worker experiences the various stages associated with injury namely, pain, anger, fear, depression, acceptance, recovery.

In addition to the physical and psychological effects of injury, the situation may be compounded with concerns regarding finances, family, status and the job. Some are well equipped to deal with these problems, but many have difficulty in adjusting to the strains of daily life without the additional stress which arises following injury and illness. People may be expected to become dependent and irritable under these conditions. Restoration of health normally causes these feelings to dissipate.

Emotional security, self-determination and personality are primary factors in the worker's progress toward independence.

THE TOTAL PERSON CONCEPT

Rehabilitation must be considered in relation to worker needs and experience. The counsellor must have complete awareness of the worker's capacities, domestic situation, finances, other sensitive areas, know the person, the situation and the problems to be solved, in order to function successfully within the vocational rehabilitation process.

THE REHABILITATION PROCESS

We recognize it is essential to commence the rehabilitation process as early as possible.

Experience reveals rehabilitation is frequently confused with retraining, however, they are not synonymous as counselling, assessment and selective placement are important components of rehabilitation.

The worker's former occupation may no longer be suitable. A job change with the employer may be the answer requiring intensive negotiation. Some may require training-on-the-job in a new trade and new environment. Others may have sufficient skills and abilities to transfer directly to a new employer in a new job.

In some instances, occupational assessment or work adjustment training at an available centre may be required to bridge the gap between illness and employment or to help overcome fears and doubts.

STANDARDS OF REHABILITATION

Vocational rehabilitation policies, administrative practices and procedures as developed by the Board have kept pace with modern trends and the identified needs and expectations of our client population.

Also, close liaison has been maintained with other jurisdictions to ensure we are fully informed of advances in the field of rehabilitation.

STAFFING

A network of field service is maintained throughout the province. Rehabilitation counsellors are permanently posted in area offices and work bases so that service is expedited in all areas. There are currently a total of 112 field rehabilitation counsellors throughout the province.

THE ROLE OF THE REHABILITATION COUNSELLOR

The rehabilitation counsellor tries to help maintain or restore the worker's morale. It is a hard task requiring special skills, qualities and effort.

Frequently, the counsellor is perceived to be a practicing psychologist and a social worker but in reality, is neither. Their skills and duties embrace technical information, knowledge and activity not associated with these disciplines.

The counsellor deals directly with people on a face-to-face basis and must be knowledgeable with all facets of the Board's operations. They must deal effectively with leaders of industry, union officials, educationalists, governmental bodies and their representatives.

Rehabilitation is not something that is the prerogative of the counsellor alone nor does the process depend entirely on that function. Rehabilitation cannot rest on any one profession or group. Should the process become fragmented, it can be destroyed. As in sports, the counsellor is a team member of a larger body that embraces many others in the helping profession. They must share joint responsibility for the success or failure of an undertaking.

Each person we work with must be dealt with as a distinct individual. The person who provides counselling, guidance and direct assistance toward successful rehabilitation, is the counsellor.

INTERNAL/EXTERNAL WORKING RELATIONSHIPS

Within the organization, the counsellors work closely with various internal resources including staff physicians, psychologists, social workers, claims adjudicators, peer members and management staff.

Externally, they interact with counsellors within C.E.I.C., Community and Social Services, local welfare offices and other established community agencies.

Physical assessments and work adjustment training are authorized within many approved community facilities such as Ability Centres, Jewish Vocational Services, ARC Industries and other workshops.

Vocational and/or combined testing is not confined to our own staff of psychologists but is, in fact, purchased on a fee for service basis within many communities were the worker resides from private registered practising psychologists.

We purchase formal, academic, skill and technical training programs from Community Colleges and approved training agencies.

CONCLUSION

In closing, it would be misleading to imply the vocational rehabilitation process is smooth flowing and always produces a successful outcome, however, it is reasonable to suggest a co-operative effort by all participants should increase the likelihood of a successful outcome.

Mr. Nolis will now be outlining the responsibilities within his Branch.

REHABILITATION RESOURCES (P. Nolis)

The process of vocational rehabilitation within the Workers' Compensation Board, begins at the time when a decision for eligibility for services is rendered.

Requests for rehabilitation assistance are received from both internal and external sources.

Besides determining eligibility for services, the specific nature and type of vocational rehabilitation service to be offered is also identified at the time of referral, in order to determine the particular area of the Division which should become involved with a client.

This process of problem identification attempts to derive the benefits that normally materialize from early determination of client needs, coupled with early contact. Within the vocational rehabilitation profession, early intervention is an absolute necessity.

The responsibility of determining eligibility, defining nature and type of need, rests initially with three main referral units within the Rehabilitation Resources Branch (dependent on the source of referral).

The three units are:

1. the Rehabilitation Service Controller Section
2. the In-Office and Preliminary Counselling Section
3. the Hospital and Rehabilitation Centre (Vocational Rehabilitation Section)

The function of two of these three referral units extends yet further, to include the provision of short-term counselling and placement services.

IN-OFFICE AND PRELIMINARY COUNSELLING SECTION

Specifically, the In-Office and Preliminary Counselling Section will maintain service to a client, whose needs may be met over a relatively short period, not requiring extensive counselling and rehabilitation services. The utilization of direct job placement and/or the Job Opportunity Bank (computerized job matching), often results in effective and positive completion of the process for those clients identified as job ready. Problem identification and determination of specific services reduces the amount of involvement, and begins the process instantly.

This particular section also services individuals who arrive at the Board's offices unannounced, requiring information and/or consideration for services. During 1982, a total of 7,420 interviews were conducted by the In-Office and Preliminary Counselling Section.

Included within the guidelines for entitlement for rehabilitation services, is the extension of assistance for injured workers who reside in another province, but receiving benefits under the Workers' Compensation Act of Ontario. Vocational rehabilitation services are normally provided by other Provincial Boards and Commissions in keeping with interprovincial understandings. The Ontario Board will ask another Provincial Board or Commission to provide vocational rehabilitation services, if an injured worker chooses to move away from Ontario, however, the worker will receive benefits and services in accordance to Ontario statute.

The In-Office and Preliminary Counselling Section is responsible for the provision of this type of service and the co-ordination of services for injured workers residing outside of Ontario. On the average, approximately 150 of these types of cases are serviced at any given moment.

HOSPITAL AND REHABILITATION CENTRE

Vocational rehabilitation counselling services are provided to all injured workers admitted to the Hospital and Rehabilitation Centre for treatment. Each rehabilitation counsellor is a member of a treatment team, consisting of:

1. a physician
2. occupational therapist
3. physiotherapist
4. remedial gymnast
5. other medical and paramedical staff as required

The injured worker admitted to the Hospital and Rehabilitation Centre is assigned to one of the following units:

1. Convalescence Section
2. General Clinic Section
3. Amputee Clinic
4. Back Assessment and Rehabilitation Clinic
5. General Trauma Clinic
6. Hand Clinic

7. Neurology Clinic
8. Psychological Social Evaluation Model

The main responsibility of the Vocational Rehabilitation Counselling staff at the Hospital and Rehabilitation Centre include:

1. Participating with Hospital and Rehabilitation Centre's Special and General Clinic Teams by providing relevant vocational rehabilitation information. Counsellors also utilize information provided by other team members, in planning and developing suitable rehabilitation programs for injured workers.
2. Interviewing and counselling injured workers for the purpose of identifying their problems and needs and determining those services which would best meet these needs.
3. Contacting accident employers (the employer where the original accident took place), to inform them of the worker's status and explore the availability of suitable employment.
4. Providing job placement assistance to workers who have specific vocational goals which can be realized over a short term. This aspect of the responsibility also includes an analysis of modified versions of the employment with the accident employer, and/or with new employers.
5. Referring injured workers who require longer term rehabilitation assistance to field rehabilitation counsellors throughout the province.

Similar to the In-Office and Preliminary Counselling Section, the Hospital and Rehabilitation Centre's rehabilitation counsellor maintains service to a client whose needs may be met over a relatively short period not requiring extensive counselling and rehabilitation service. The counsellor will also utilize direct job placement and/or the Job Opportunity Bank.

A great deal of interaction takes place with the field counsellor and the Hospital and Rehabilitation Centre counsellor to ensure that all the necessary services are provided to injured workers who have already started the rehabilitation process prior to admission.

SPECIALIZATION

Vocational rehabilitation in practice is a multidisciplinary process which incorporates numerous variables that are to be considered when assisting injured workers to return to employment. The rehabilitation counsellor may call upon various specialists to help in attaining the ultimate goal. Specialized staff enhance the professional approach and the service levels offered to injured workers.

Specialization can be used effectively when it functions in a consultative role, avoiding duplication, resulting in better utilization of manpower and improved service levels. Counsellors may choose to discuss particular needs, problems, etc., with a rehabilitation specialist, if extensive involvement in a specialized capacity does not appear to be warranted.

SOME AREAS OF SPECIALIZATION

1. Financial

It may be recognized that effective rehabilitation is not possible due to a variety of personal financial problems. A group of staff knowledgeable in the field of budgeting, credit counselling (such as foreclosures, repossessions and debts), can provide specific assistance to injured workers requiring this type of service in order that the rehabilitation counsellor may proceed with the rehabilitation plan.

In addition, this section of the Branch (the Commutation of Pensions and Long-Term Advances Section) may carry out commutation of pension, in accordance with the Workers' Compensation Act as a rehabilitation measure, if it is considered to be in the injured worker's advantage.

It is essential that a commutation be looked at as a part of a planned rehabilitation program and carried out in accordance with guiding principles.

To receive approval, a request for commutation must meet each of the following requirements:

(a) It must constitute a new or continuing rehabilitation measure, and show evidence of being in the injured employee's advantage.
(b) It must be clearly established that the injured worker has insufficient assets for the intended purpose.
(c) All other possible sources of financial aid and counselling must be explored and evidence must be presented that the injured worker has been participating in attempting to resolve the problem.
(d) Commutation must not be granted to provide only a temporary relief which fails to resolve a chronic problem.
(e) A commutation in whole or in part must not jeopardize the injured worker's ability to meet continuing financial obligations.

Some reasons for commutation of pension that have received attention are:

(a) the purchase of a home
(b) payment of mortgages
(c) investing in a new business

(d) expansion of and/or improvement of an existing business
(e) reduction or clearance of debts
(f) purchase of a motor vehicle
(g) emigration

During 1982, a total of 2,979 injured workers submitted a written request for consideration of a commutation of pension. After receiving a written explanation of the impacts that a commutation of pension may have on long-term monthly pension amounts, as well as the financial implications of such a request, 1,107 injured workers decided not to pursue their request beyond that point. Of the remaining 1,872 injured workers who did pursue their request, approximately 21% did have a favourable decision, approximately 32% had been denied and a further 47% decided to withdraw after receiving counselling and direction from a rehabilitation counsellor.

2. Social

Marital, family or personal problems also contribute on occasion to client instability. Increased emphasis upon assessment and treatment of personal and social problems which hinder the rehabilitation process, as a consultative measure, will support the rehabilitation counsellor's responsibilities.

A social worker is often called upon to assist the rehabilitation counsellor when:

(a) social
(b) environmental
(c) emotional
(d) cultural
(e) marital
(f) family
(g) personal

problems arise and delay the rehabilitation process.

During 1982, a total of 966 referrals were directed to the Social Work Section involving cases throughout the province.

3. Vocational

Our vocationa rehabilitation specialists specialize in various types of disabilities, such as:

(a) paraplegia
(b) quadraplegia
(c) severe head injuries
(d) complex cases

This move affords the specialists an opportunity to become fully conversant with specific complications and needs, enabling the Division to provide more effective service. Specialists may provide consultative assistance to rehabilitation counsellors to one particular client or to the client directly by way of a referral.

Case assignments to rehabilitation specialists are made in accordance to designated disability type and geographic work territory, spanning across Ontario.

During 1982, a total of 137 cases were directed to the attention of rehabilitation specialists. This figure is expected to increase during 1983.

INDIRECT SPECIALIZED ACTIVITIES

1. Research

The scope of our program has widened and grown to meet expanding needs of the injured workers in Ontario.

Evaluation of our service delivery is a must, so that we may plan for the future and set our objectives and direction.

Variables contributing to successful rehabilitation need to be identified and we must always be aware of the rapid advancement being made in our field.

Analyzing past performance to establish historical background that can be used as a base for future research, requires a great deal of time and individual file review.

Our rehabilitation counselling staff, can benefit greatly from historical background and thus the Research and Development Section was established as an indirect aid to help in improving our services to injured workers.

Although this is a relatively new area of responsibility for the Branch, we are looking forward to future expansion, as more needs and projects are identified.

STAFF TRAINING AND DEVELOPMENT

In our attempt to prepare new rehabilitation counsellors for the various work settings within the Vocational Rehabilitation Division, an aggressive and detailed new training program has been established within the Division to provide necessary preparation for new employees.

In addition to initial training, our ongoing development training program has expanded, in our attempt to meet the needs of counsellors, so that they may become aware of new techniques and be consistently up-to-date with developments in the field of vocational rehabilitation.

Staff Training and Development programs that were conducted during 1982 included:

1. Report Writing
2. Community Resources
3. Starting a New Business
4. Employment Trends (computer field)
5. Stress Management
6. Transferability of Skills

7. Short-Term Marital Counselling
8. Counselling Techniques

The Branch also provides support assistance, such as:

1. Transcribing via word processing
2. Telephone enquiry
3. Payment activities
4. Filing
5. Systems development

EMPLOYMENT SERVICES (C. G. Brownell)

BACKGROUND

In Ontario, it has always been and continues to be a function of the rehabilitation counsellor to assist in obtaining employment opportunities for our rehabilitated workers. However, we recognized in the mid 60's the need for this activity to be addressed on a full-time basis.

At that time, we thought it sufficient for one person to canvass employers for the entire division, and therefore a position of an employment specialist was created.

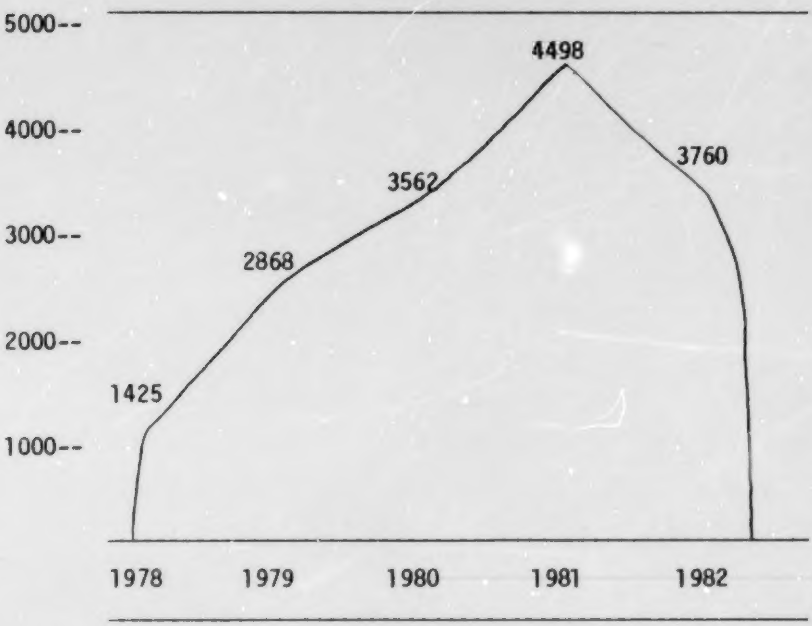
The employment specialist is responsible for contacting as many employers as possible and explaining our training on-the-job and assessment program to them and securing employment opportunities. Briefly the program is divided into two sections. One is an assessment portion with the second phase being actual training on-the-job. During the assessment period, the full wage is paid to the employee directly by the Workers' Compensation Board. The assessment program usually last 4-6 weeks, and if necessary training-on-the-job can be instituted after this assessment phase. The training on-the-job program can be extended up to one year with the employer paying a portion of the worker's salary directly to the worker with the Board reimbursing the employee for the remaining amount. This is increased on a graduated scale throughout the training program. Once the worker is totally trained, he/she then starts at the beginning wage which was negotiated with the employer before commencement of the program.

We will also bear the full cost of any necessary alterations in the workplace, i.e., installing access ramps for wheelchairs or purchase of any specially designed office equipment that is necessary.

Schedule 1 employers, which are the employers who pay assessment to the Board, also receive coverage throughout the assessment and training program of our Second Injury and Enhancement Fund. This fund pays for all compensation costs incurred whenever a rehabilitated worker is injured at work, during an assessment period or on-the-job training arranged by the specialist or counsellor. It also extends coverage for any recurrence of the worker's original disability attributed to the original injury as these costs may be charged to the original claim and not to the new employer. Our program is designed so that the employer needs to sign only two pieces of paper, and is administered directly by our Vocational Rehabilitation Division. The employer obviously saves costs involved in training and the time that is usually devoted to pre-screening and advertising.

With the expansion of our division in 1978, the Employment Services Section was formed so that a concentrated effort could be made to locate job opportunities. Currently, we have thirteen employment specialists in the division who are each assigned a territory in the province. By using a variety of methods from cold canvassing, speaking engagements to employment blitzes, the employment specialist tries to obtain suitable jobs for our injured workers.

As you can see from the following chart, the statistics confirm that we have taken the right initiative. This chart illustrates the jobs obtained from 1978 to 1982.



JOBS FOUND

EMPLOYMENT CAMPAIGNS

As stated earlier, one of the methods we utilize to inform the employers in our province about our program and the advantages of hiring rehabilitated workers, is through a collective effort called our employment blitz campaigns. Since 1978, we have used employment blitzes to achieve several objectives, the major one, of course, being to obtain a large number of jobs in a particular area in a short period of time. The second objective is to promote future contacts for the area employment specialists.

For the duration of a blitz, usually one week, all employment specialists may be used to thoroughly canvass a city or region. Daily meetings attended by the local rehabilitation counsellors are held in a central location to manually review the jobs obtained during the day. Appointments are arranged for the most likely candidates and each counsellor takes several workers to a job. Speaking engagements are also arranged during the blitz week for the chairman, the executive director, or other staff members. We have also persuaded municipalities to proclaim the week of the blitz "Hire a Rehabilitated Worker Week" and the attended publicity has increased the awareness of our program.

We have found the employment blitz campaigns encourage peer interaction among counsellors, and that in a one week period, we obtain as many jobs as we normally would in a 2-3 month period for that given area.

As we enhance our job search program, and when we started to obtain over 3,000 jobs a year, we realized that the manual system of recording and distributing information to the vocational rehabilitation counsellors was no longer suitable. In spite of our best efforts, many jobs were being filled from the outside before our staff could respond with the appropriate client. We therefore, computerized the matching process and the result was the J.O.B. System.

The Job Opportunity Bank System, or J.O.B. as we call it, has eliminated many of these problems. Briefly, the J.O.B. uses as series of matching criteria to compare a worker's qualifications with a comprehensive job description.

The system contains two data base centres. One data base contains profiles of work ready clients (Worker's Profile) the other, available job opportunities. These two data bases are analyzed daily for the purpose of matching rehabilitated workers' abilities to available job opportunities.

A specific set of matching criteria or data elements are coded by rehabilitation counsellors for each work ready client, according to their capabilities, and desired locations of work. Job opportunities are also described and coded in terms of the requirements using the same criteria. Therefore, matches only occur in the geographic region chosen, the type of job requested through utilization of CCDO codes, and the physical matching criteria which are bending, walking, sitting, lifting, standing, hand/eye coordination and spoken and written English and French.

When a match is found, both the employee data and job data are printed. Each rehabilitation counsellor is provided with a list of work ready clients and matched job opportunities at the end of each run. In addition, job opportunities and worker profiles can be assessed on visual display units located across the province. A computerized system isn't necessarily the answer for everyone, it is obviously most feasible in urban areas where jobs are numerous and rehabilitation counsellors have ready access to video display terminals. In remote areas, often there aren't enough jobs to warrant computerized matching. The Job Opportunity Bank System has, nevertheless, been very successful for our division.

ORGANIZED LABOUR'S INVOLVEMENT

In 1979 and early 1980, we realized that to continue to receive the employers' co-operation in the province, we must also have acceptance of our program by organized labour. Although all the employment specialists meet on a fairly regular basis with the major labour unions in their area, we have a rehabilitation program specialist who concentrates specifically in this field. Through this individual (who had many years of prior experience in this field), we have made a complete effort to contact as many unions as possible to explain our program in detail and receive their endorsement. This year alone, we have received more than sixty letters of endorsement for our program from various unions throughout the province. The program has also been endorsed by the Ontario Federation of Labour. The program specialist is also available to assist both management and labour in the creation of appropriate language to their collective agreement, which would protect their own workers' job security in the event of a compensable accident. Where such language has been completed, this has lessened to some degree the seniority concerns of organized labour.

PLACEMENT SPECIALISTS

Another innovation which was implemented in 1980 and which has been useful in helping us to achieve our goal of placing as many injured workers as possible, was the establishment of the placement specialist section. This group of eight people manage reduced caseloads of complex employment problems. Each specialist has improved the effectiveness of rehabilitation counsellors by removing the time consuming, complex cases, from their workloads. Additionally, the placement specialists liaise with affirmative action groups involved in the placement of disabled workers in both the private and public sectors.

The placement specialists have also been involved in the field of ergonomics. With their increased knowledge in this area, a complete work site analysis can now be completed and a job demands analysis for the injured workers. Matching these two together assists the employer who is trying to supply suitable modified employment for their own injured workers. To date, we have found this to be a very useful tool especially in the complex cases.

IMPACT OF TECHNOLOGY

No discussion of employment is complete without at least mentioning the impact of technology on injured workers. There are fundamental changes occurring in the nature of working life as we know it. Many traditional, labour intensive occupations that were the domain of the unskilled, older worker, have been eliminated. We expect this trend to continue, with the result that in the future, even fewer jobs will be available that are suitable for our needs.

The possibility of retraining injured workers to assemble or operate the equipment that is replacing them is currently being explored. The short-term results, however, are not encouraging. While an injured worker with prior experience in, for example, machine set-up could be retrained to repair and maintain industrial robots, we are finding that jobs of this nature are first being offered to those workers who have been displaced by the new technology. Our approach, therefore, has been to focus on the larger implications of automation, rather than a specific development such as robotics.

In order to reduce the possibility of sponsoring training in areas about to be rendered obsolete by automation, we have established a series of employment projections or forecasts.

EMPLOYMENT FORECASTS

Through the Employment Services Section, Vocational Rehabilitation Division management is provided with a labour market update at least twice a year containing occupations and trades that are projected to be either in demand or in surplus over the forecast period.

Rehabiliation staff receive a synopsis of this information every two months entitled, "Focus on Employment". The data is obtained by our special projects coordinator, who meets regularly with the six provincial district economists employed by Canada Employment and Immigration, in addition to reviewing information from Statistics Canada and a number of research organizations in the private sector.

TRAINING INSTITUTIONS

We have also undertaken an analysis of private vocational training institutions, to assess their viability in terms of placement. We believe, that to a large extent every agency that accepts the onus of training an injured worker, also has a responsibility to place that person. Therefore, every institution that requests consideration from the division undergoes an evaluation in accordance with a divisionally approved format. The placement records of the agency are scrutinized and we attempt to secure a commitment that placement assistance will be provided. The evaluation is then presented to our divisional management group for resolution.

As costs for rehabilitation expenditures are ever increasing, it has become imperative to recommend appropriate avenues of both technical and academic training. As a result, we are now redirecting a number of injured workers from traditional occupations such as welding - where there is a significant dearth of vacancies - to computer technology where there is at least a moderate demand for qualified practitioners.

We have also gained some insight as to the type of training which employers deem appropriate for their needs. We know, for example, that industry will not consider our rehabilitated workers for occupations within the computer field, unless their formal training has been of at least two years duration.

SUMMARY

I hope that this overview of our services has been of some interest to you, and certainly if we are to continue to enhance our delivery service to the injured workers in our province, it is clear that we must keep pace with the new technology which is changing the employment patterns and demands not only in our province but throughout the country and indeed the world.

CONCLUDING COMMENTS (J.D. Carroll)

COMMUNITY INVOLVEMENT

At the Workers' Compensation Board, we have taken an active role in the research and development of vocational rehabilitation services. We are generally recognized as being on the leading edge of developments in our field. In fact, our commitment to refining and improving our service is reflected in the degree of our involvement in the rehabilitation community.

In sharing our experiences with others, and acquiring new information to help us do our job better, we are committed to a number of special initiatives as follows:

1. Outside speaking engagements
    (a) service clubs
    (b) radio and television talk shows
    (c) rehabilitation conferences and seminars
    (d) presentations to various professional organizations
2. Federal-Provincial Government Research Studies and Initiatives
    (a) Inter-Ministerial Committees; e.g., the "Council for the Equal Employment of the Disadvantaged"
    (b) Task Force Reports; e.g., The "Linking for Employment" report prepared by Ms. Jean Pigott and her associates
    (c) The Ontario Handicapped Employment Program's "Functional Capacities Assessment" project

    (d) The Provincial Secretariat for Social Development
        - Secretariat for Disabled Persons, and
        - The Ontario Advisory Council on the Physically Handicapped

3. Conferences
    (a) Vocational rehabilitation staff were heavily involved with Rehabilitation International's 1980 Pre-Congress seminar on Vocational Rehabilitation held in Toronto
    (b) We are now involved with this Tenth National Consultation on Vocational Counselling
    (c) Also, we are contributing to the planning of a National Conference on Vocational Rehabilitation that will be held in Toronto in the fall of 1984
4. Professional Rehabilitation Organizations
    (a) Many of our staff are actively involved with the Canadian Association of Rehabilitation Personnel
    (b) We have a close liaison and working relationship with the Canadian Rehabilitation Council for the Disabled
5. Resources
    (a) We have been consulted, and been a participant in, the development of the new Rehabilitation Studies Program jointly developed by York University and Seneca College in Toronto
    (b) Our input was solicited for a Federal Government study into the development of a rehabilitation program for the Post Office

FUTURE CHALLENGES

As many of you are undoubtedly aware, the Ontario Government commissioned Professor Paul Weiler of Harvard University to conduct a study into the compensation scheme in Ontario. In response to this study and its attendant recommendations, a "White Paper" was prepared by the Provincial Government, including a draft of revised legislation for a new Workers' Compensation Act.

While there are numerous significant changes that will be forthcoming should the new legislation be enacted, there are three significant impacts for Vocational Rehabilitation:

1. The provision of rehabilitation services to widowed spouses of injured workers
2. Vocational rehabilitation to "deem" the suitability of job opportunities
3. New mandatory requirements for accident employers to offer regular or modified work to the injured worker within two years of the accident (specified conditions).

Clearly, the final outcome of the discussions and deliberations surrounding the draft legislation is unknown at this time. However, we are anxiously awaiting the final disposition of this topic, which is expected toward the middle of 1984.

We are presently devoting considerable attention to a number of items, each of which will have singular importance in the future of our work. Matters currently under review include:

1. Ergonomics: Through studying man/machine relationships we may be afforded an opportunity of encouraging workplace design changes or modifications to work procedures to better enable injured workers to secure gainful employment.
2. Employment Trends: With the major technological revolution now occurring in the workplace, innumerable profound impacts are being placed upon employment as we traditionally know it, thereby affecting the labour market and how we do our work.
3. Research: In order to keep pace with change, and to ensure the provision of efficient and effective vocational rehabilitation service, there is a need to undertake evaluative statistical research and analysis.
4. Employer and Labour Participation: It is becoming increasingly necessary to solicit and ensure the co-operative participation of both the employer and organized labour in the rehabilitation process, as a means of effecting satisfactory, long-term placements.
5. Training: To meet the specialized needs of new jobs in an expanding technological employment market, it is becoming necessary to encourage and support the development of short-term skills training programs.
6. Public Awareness Campaigns: There is a continuing need to positively influence public attitudes about disabled persons and our work.
7. Monitor Service Effectiveness: As public service providers are being held increasingly accountable for their service effectiveness, there is a need to conduct cost-benefit analyses and other self-assessments as a means of evaluating service performed in order to maintain consistency and improve quality, where necessary.
8. Vocational Evaluation: Improved measures of testing and evaluating vocational interests and aptitudes are being explored and utilized in the rehabilitation process.

SUMMARY

Our objective had been to share with you some information about the vocational rehabilitation services offered by the Ontario Workers' Compensation Board. We have looked at the specific objectives of the Vocational Rehabilitation Division, the philosophic base on which its policies and programs are formulated, and we have considered the matter of service eligibility. Messrs. Boyd, Nolis and Brownell have presented detailed commentary on the Counselling, Resources and Employment Services components, respectively, of the overall program. Finally, we discussed the activities of the Division related to community involvement, and made some observations concerning a number of challenges that it will be facing in the future.

We are hopeful that you may now better understand the nature of our work, as it is only through this type of understanding that we may be able to mutually rely on one another for support and assistance.

EXPLORING THE FRONTIERS OF CAREER DEVELOPMENT

Donald E. Super
International Coordinator, University of Florida

You have in your hands the handout from which and about which I shall be talking: exploring the frontiers of career development.

The first figure is the Life Career Rainbow. It has appeared in print in a variety of places, particularly in the Journal of Vocational Behaviour in 1980. It is designed to show something about two aspects of a career: (1) is the LifeSpan notion that a career begins at birth and goes on till death, from the cradle to the grave; (2) the other dimension is the spatial dimension, careers are made up of a variety of roles, beginning with that of child, and ending, in the case of people who live a normal life span, with the roles of leisurite and citizen and pensioner. This I find a very useful way of reminding myself that an occupation is one aspect of the career, and that there are pre-occupational roles and post-occupational roles. I think we need to coin a new term, para-occupational roles, other roles that go along with one's occupation, simultaneously during part of a lifetime. We'll see later on, that that is not just a heuristic or theoretical concept, but a very practical one which lends itself to use in exercises in counselling and training activities. Figure 2 has to do with life stages and substages. This too you may have seen, for in exploring the frontiers of career development, its growing edge, we have to look at some of the terrain we've already covered, before looking at some things that will be newer to you than these particular figures. This figure is an attempt to put into geographic form my conceptualization of life stages based on earlier work that others did back in 1930's, incorporating my own work since, and, I'm glad to say, essentially replicated in the most recent work of people like Levinson and Lowenthal. Here we have the life stages that are depicted in a different way on the rainbow. There are also some characterizations of the developmental tasks that are encountered at these life stages. During the Growth Period, as Ginsberg pointed out in the 1950's, the child is in a fantasy stage. Later the children go through sub-stages of thinking more about what interests them, and then about what they can do, followed by Exploration with the tasks of trying things out and of making the transition from adolescence to adulthood. All of these, I'm sure, are now familiar concepts.

Let me introduce a personal note here, that has to do with the topic of my retiring mentioned when I was introduced. When I reached the age of 65, that of mandatory retirement then of Columbia, one of my colleagues asked whether I would change the title of that last stage from Decline to something more positive now that I had reached it myself. He saw it as a pejorative term. I don't see it as such. We all decline once we reach the age of 25. We don't run as fast as we did before that age, the 100-yard-dash is more demanding than it used to be. So it's a relative and normal process. Why not recognize that in some ways people do decline throughout adulthood. As long as the sunset is beautiful, it does not sadden one greatly that it is setting: it would not be so beautiful if it did not set.

What we have here is something that we might call the maxicycle of life; I would rather call it the megacycle, but that term already has a different meaning. There is a major life cycle of growth, exploration, establishment, maintenance and decline. That has too often been thought of as being an inevitable and fixed sequence with no recycling, and one of the frontiers, one of the growing edges of career development theory and practice in recent years has been recognition of the fact that one does recycle through some of these stages, that there are minicycles in the maxicycle. Reaching that age of 40 or 45, some people, contemplating what they're doing, ask: "Do I want to keep on doing what I have been doing so far even though I do it well and have enjoyed it? Do I want to make a change?" What many of us think of as "Career Crises" are not necessarily crises, they are just part of the normal development of recycling occasionally as in going through the main life cycle. So this is a repetition of exploration and establishment.

Take retirement, too. Each time one retires, one explores again. And what does retirement mean for me? What are my options? In my own instance, retirement the first time from Columbia University, was just as exciting and stimulating as was finishing graduate study. I found I had a variety of interesting options. The world was my oyster and I could open it. In fact, I had more options on retiring that I had when I got my PhD, because I got it during the Great Depression and there were then three jobs that really interested me and were pertinent to competencies and experience I then had, two jobs in fact that were of real interest and one that wasn't worth thinking about. When I retired there were more options, partly because the economy was in better shape. So I again explored and established myself in a new position. This happens several times throughout life, and it is important to recognize it. One of the indications of the fact that we do recognize it and trying to do something about it is the current interest in the kinds of TRANSITIONS that people make. This is a recognition of the constant recycling that people who are alert go through, and of the recycling that is forced in crisis form on those who do not foresee developments that call for recycling.

Figure 3 comes from an article that appeared in the May 1983 Personnel and Guidance Journal, and it outlines a new model of assessment and counselling for vocational guidance, and that is why it is called the basic assessment. One of the important concepts of the past thirty years that has itself matured in the past ten years, is that of career maturity. We now know both what it is and how to measure it. We have here an analysis of what career maturity actually is, the readiness to make career and vocational decisions. Here are traits that do need to be looked at in vocational counselling. These include:

1) Autonomy: is this person an autonomous decision maker? Will he or she go about doing this on his or her own, or is this a dependent person who is not going to do much planning, who is going to lean pretty heavily on parents or the counsellor or on friends? How one counsels this person will depend to a considerable degree on the degree of autonomy that he or she exercises.

2) Time perspective too, is vital to decision-making and to career maturity. Time perspective seems to be made up of at least two traits that are highly relevant to vocational counselling. One is reflection upon experience. Where have I gotten, how did I get here? How satisfied am I with where I am and with how I got here and with the implications for where I may go from here? Relatively few teenagers ask this, as we observed in the Career Pattern Study. A fair number of young people reaching their mid-twenties, especially people who have either dropped out of high school or completed high school and gone no further, begin to take stock and say, in so many words, "You know I have been floundering around so far. I've just come to recently and I've recognized I'm not getting anywhere and I'm not satisfied with being there". One is reminded of David Campbell's popular little book - If You Don't Know Where You're Going, You'll End Up Someplace Else. Many people at age 25 realize they've not known where they're going, and they've ended up someplace else and they don't like it.

Reflection upon experience is thus something adolescents don't easily or frequently do. The second component of time perspective is anticipation of the future. How far ahead does a person look in his or her thinking, in his or her fantasies? Some people fantasize and in fantasy think ahead. Thus a little child says "when I'm grown up I'm going to ...". Much fantasy thinking is idle thinking, but controlled, it may be quite useful as exploration. But its defect is that it too often misses the linkage between the present and that distant future about which the person is fantasizing. But real time perspective includes linking the present with the future, attending to how to attain the future goal. All who have worked with high school students know that to the 14-year-old the age of 18 or 19 and graduating from high school are remote. In the junior year of high school, graduation may seem real but what is going to happen afterwards is not real and is not really contemplated in detail.

It is in this area of planfulness and time perspective that we need to learn some of the things that personality theorists, clinical psychologists and developmental psychologists have been paying attention to in recent years. Time perspective, what is it, how does it develop? How can we as teachers help to develop it, how can we as counsellors assess it and help people to look at time more effectively? I could elaborate on each of the topics in this table, but some of that elaboration you can do or have already done yourself. Take the concept of self-esteem for example. How can a person really be autonomous if he or she doesn't think well of the self: "I am no good therefore I cannot decide or plan, it's no use looking ahead", or "I am good, I am a competent person, I can do things, therefore I can have some control over my fate. I can look ahead and see what may be coming and maybe I can do something about it." This is a familiar concept.

A few words about the information component. Here, information is not just about the world of work, not just information about the occupations that one is most interested in. Those are very important, but that is not exactly a frontier area in counselling, for that is pretty well developed territory. But notice that listed here is information about other Life Career Roles such as Leisure and Homemaking: some of these are novel ideas. In the Work Importance Study, in which Canada is playing a major role with a dozen or so other countries, we are looking at the relative importance of work. After all, people are homemakers, both men and women. People are citizens. They do have leisure time.

Our Australian colleagues in this study came up with a term that delights people: "the shirk ethic". There is not only the "work ethic" but there is also the "shirk ethic". The "shirk ethic" in Australia is not the notion or the value of avoiding work, it is the notion of working hard so one can play hard. In the minds and values systems of those who subscribe to the "shirk ethic" work is less important than the leisure that it makes possible. It is the weekend and the holiday and the long vacation that are the principal reasons for working in the minds of some people, not just in Australia but elsewhere.

What are these other life career roles? What impact do they have on each other: are they supplementary, complimentary, competitive, or conflicting? This is the growing edge of guidance and counselling. We are going to find increasingly, as our field of vocational guidance and career counselling develops, that we are going to be not just vocational, we are going to be para-vocational, we are going to have to think to the other life roles. We are going to be much more helpful to our students, to the clients we see, and to our institutions. If we are able ourselves to think of the constellation of roles that constitutes the Career Rainbow we must help people develop in the various roles that are most appropriate for them and that are most likely to provide them with suitable outlets for abilities and interests.

Decision Making is also basic to career maturity. We have usually thought of vocational counselling as helping with decisions in the simple, classical matching model.

Matching people and jobs involves helping with decision making. If we look at the principles of vocational guidance as they were outlined in the books of the 1930's and the 1940's, they stressed, 1) finding out what the person's abilities are then, 2) finding out which occupations provide the best match, and then 3) helping the person to prepare for and get into one of those occupations. That being a simple outline of it, obviously, is too simple and doesn't do it justice. Moving from step 2 to step 3 is helping with decision-making. But we have found that there are several quite different decision-making styles. Here is one of the important frontiers of career development theory and of the practice of vocational counselling.

When I retired from Columbia University and went to Cambridge, England, to head up a major research project in the National Institute for Careers, Education and Counselling, we began to chart what it was we should do in this new institute to further career development in Great Britain. One of the domains we looked at was decision-making because we all know courses in career decision-making and aids of various kinds for career decision-making. *Choices* and *Discover* and other such computerized systems are of course aimed at facilitating good decision-making. I was rather shocked when Jenny Kidd, whom some of you know because she was here for one of the early Consultations, one at which some 24 of us sat cosily around a table, rather fewer than the several hundred we are now. You're trying to teach people to make decisions logically. The models of decision-making are all based on rational decision-making and most people aren't consistently rational. I'm not sure what jargon my colleagues then used, but they pointed out that some people are impulsive, some people are intuitive, and some conformists do as other expect. They went on: "Can you teach an intuitive person to act logically? Would we put all of our students into a straight jacket by trying to teach them logical career decision-making?"

I had to think a bit about that, and I'm not sure that I've come up with the answer. Maybe we'll have a chance to exchange ideas on this later on. But one of my reactions was then and now is: Has anybody ever developed a course for irrational decision-making? How does one teach people to make irrational decisions? Do we want to? Maybe rationality is all right. Maybe the real issue is: how does one help a person who is impulsive to use a rational approach to decision-making? How does one make rational decision-making congenial, compatible, feasible for a person like that? And then Tanya Arroba, a researcher who did a degree at the University of Liverpool, came up with a notion I found rather helpful. If that was that intuitive decision-making that has been made at some time past, stored in memory, and is retrieved when the decision point is reached. Faced with a previously anticipated decision, one is ready to make it. One has faced it before in one's fantasies or one's thinking. One has asked, what data do I need? One has collected and analyzed the data and one has come up with an answer and stashed it away for future reference. This is something we need to look at. How can we help people to anticipate? This takes us back to planfulness and to time perspection.

How can we help people to anticipate, to look at what they need and store their conclusions away for future use and retrive them when their time comes. Retrieve them, not to use it as decisions that are irrevocable but to use them as bases for a decision that has been made tentatively and that can be reviewed in the light of possible new evidence. The model we have just looked at is one that should be applicable to adolescents and there is not much difference in this next model, Figure 4, for adulthood, except that it focuses a little bit more on adulthood.

In Figure 5 we have some illustrations of cycling and recycling, to provide a corrective for thinking of the life cycle as being a rigid progress, a linear progress from growth through decline. In the maintenance stage, for example, one may be doing what is normally an adolescent task such as verifying an occupational choice: this is really an exploratory task. In maintenance one may also be performing a task of middle adulthood, holding one's own against the competition. At any particular life stage, one may be performing some tasks that are typical of other life stages.

Figure 6 was prepared last year, on faculty career development and workshop on academic careers. It is relevant here because the stages are listed at the left and some of the typical tasks are shown in the next column. It shows also some of the options that people have as academic administrators, as researchers, and as teachers, across the top. In the establishment stage, for example, one of the tasks is to try things out, and for young administrators there are questions of what to try out and how. As one progresses up the column to the next stage of an academic career, one sees some of the typical maintenance tasks. One of the maintenance tasks is holding on to what one has; if one is a teacher (the rightmost column), one of holding on questions is: "Am I good now? Is that good enough?" The next kind of task shown is to update. "Do I need to update? Am I getting stale? Is the field getting away from me?" In the early 1960's I said to some of my students: "Let's spend the summer learning computer programming. If we don't, you and I will be as dead as the dodo, professionally, in ten years". So we spent the summer together learning programming, not because I wanted to be a programmer but because I wanted to know exactly what programmers could do for me, and how. So one asks, "do I need to update? In what ways and how do I go about doing it?" Although this is for academic careers one could create a table of this kind for any field.

Figure 7 shows the academic career decision tree: applying some of these notions to the academic career. It shows the choices that one has to make, the opting in and the opting out. Figure 8 shows methods of Coping with the

Developmental Tasks of Establishment in academia. How does one get established as an academic administrator? How does one get established as a reasearcher in an academic setting? Coping methods vary, even in one field of work, even in getting established as a teacher. This is so shown by an informal analysis I made for a young friend of mine in Savannah, a brilliant young woman who is considering both Harvard and Yale and is likely to be admitted to both places. She is faced with a decision, and having connections in both places I had an inside picture to share with her. The ways of getting ahead as a faculty member at Harvard and at Yale are rather different in ways which are important to the choice of undergraduate work. How the faculty gets ahead has impact on undergraduates for faculty members may sacrifice informal educational contacts with them in order to pursue research and its related graduate teaching.

There are more frontiers. Let us look at the product of some recent work with people in Charles County, Maryland, a largely rural county. This is a tentative model of career development in the elementary school (Figure 9). Why do people explore occupations? Does it happen because of curiosity? There have been many studies of infants and animals that have told us that exploration is an innate activity. Animals and people are curious. The detailed evidence is irrelevant here but a Canadian, Daniel Berlyne, amassed it all back in 1960, restoring the construct of instinct to respectibility. Exploration, curiosity is an instinct. Does society encourage it? How does curiosity in the elementary school bear on career decisions? It affects how interests develop, whether or not one develops a sense of autonomy (internality) and time perspective. There is some exciting work going on now in Charles County as we look at the implications of this model of decision-making for career development in the elementary schools. Is it enough to just have children go to the fire station and see what firefighters do and how a fire engine operates? Is it enough to just take them to the post office to show them some other occupations? Or, should we, do we, teach them time perspective? (See Figure 10). How does one teach time perspective? Not in the abstract, obviously. What kinds of experiences would teach it? What kind of course, what kinds of units, would we have in order to teach children autonomy and time perspective? These, some of us are convinced, are the important bases for career development in the elementary school, much more fundamental than information.

Helen Astin has developed a model of career choice and work behaviour in girls and women (Figure 11). And one of the things that delighted me in this innovative model is that Astin proved herself not to be a female chauvinist. She found that model of career development in females is also a good model for career development in males. There is no gender language here: it applies to both males and females, helping to demolish the notion that women are different. E.K. Strong concluded this in his monumental volume on the vocational interests of men and women back in 1943, but he was a man. One of his major findings when he looked at the vocational interests of men and women, and analyzed the differences and the similarities, that women are much more like men than they are different, or, one might revise that statement and say: men are more like women then they are different. That seems to be what Helen Astin also, today, is finding.

I shall skip the other material, which nevertheless are worth pursuing. These include data (Figure 12) from a report prepared by Jan Loken on the Work Importance Study in Australia and I abstracted the as yet unpublished study because her results show the nature of values and how they affect career decisions.

The Values Scale and the Salience Inventory were administered to samples of 430 secondary school and 195 college students, together with 95 adults, in Australia by Dr. J.J. Lokan. These instruments made it possible both to ascertain the relative importance of the five major life roles assessed by the SI and to examine the values sought by each of these samples in each of these roles. Discriminant analyses were performed to show whether groups formed by their level of commitment to a role (high, medium, or low on each of the five SI scales) could be differentiated by their patterns of values on the VS.

The results are shown in Tables 1 and 2. In the former, the two student samples are seen to have higher Commitment than Participation scores for all roles but that of Leisurite, where they are about the same. In the worker sample they are about the same for the Student and possibly for the Worker and Leisurite roles. There appears to be a trend toward decreasing participation in and commitment to the Leisurite role from school to employment.

College students report themselves as spending more time in studying and appear to feel more committed to their studies than do high school students, and less committed to the worker role. The workers scored much higher on the Worker-Participation scale than the other two groups, and were also higher on commitment to the worker role; they were also higher in participation in Home and Family activities.

Table 2 shows that students committed to Studying and Working tended to score higher on the values of Ability Utilization, Achievement, and Advancement and lower on Physical Activity, while the workers committed to their role valued the values of Personal Development, Authority, Prestige, and Social Interaction. To the committed workers the values of Life Style and of Autonomy were of little importance (had negative values), as was also Physical Activity.

Figure 13 shows how the Life Career Rainbow can be used, how it is used in a high school course JoAnne Bowlsbey and I developed. One can use this form with people who are already past 35 and have them portray themselves as they are now and have them look ahead and see how they would like their careers to shape up.

Finally, the rest of the materials are similar to those in the May 1983 issue of *Personnel and Guidance Journal*. There I sought to contrast the trait and factor model of matching people and occupations with a developmental assessment and counselling model (Figure 14) in which we help people to grow and to develop their careers, just as we seek, in conferences such as this, to further develop our own.

Figure 1.

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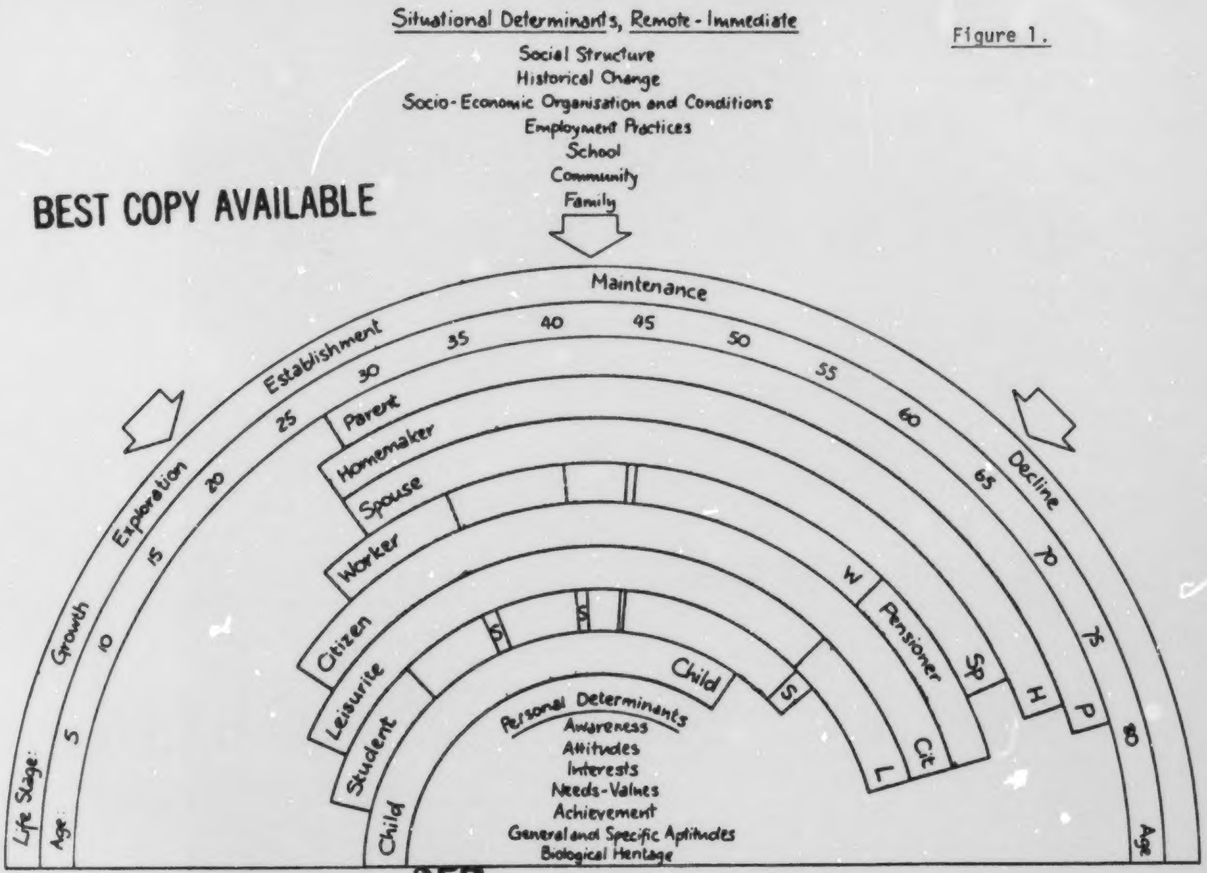
Situational Determinants, Remote - Immediate
Social Structure
Historical Change
Socio-Economic Organisation and Conditions
Employment Practices
School
Community
Family
Life Stage:
Growth
Exploration
Establishment
Maintenance
Decline
Age:
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
Age
Parent
Homemaker
Spouse
Worker
Citizen
Leisurite
Student
Child
W
Pensioner
S
S
S
Child
Sp
H
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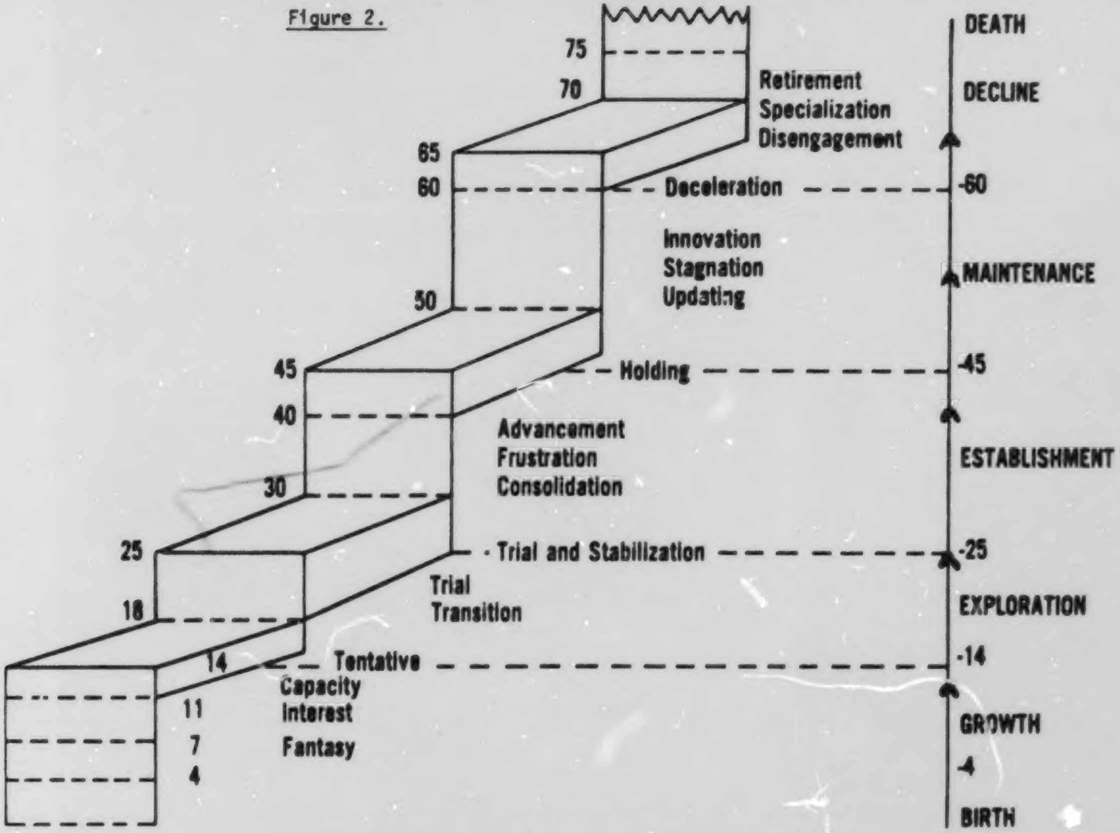
L
Personal Determinants
Awareness
Attitudes
Interests
Needs-Values
Achievement
General and Specific Aptitudes
Biological Heritage

Figure 2.



75
70
65
60
50
45
40
30
25
18
14
11
7
4
Retirement
Specialization
Disengagement
Deceleration
Innovation
Stagnation
Updating
Holding
Advancement
Frustration
Consolidation
Trial and Stabilization
Trial
Transition
Tentative
Capacity
Interest
Fantasy
DEATH
DECLINE
-60
MAINTENANCE
-45
ESTABLISHMENT
-25
EXPLORATION
-14
GROWTH
-4
BIRTH

DES July 1981 LIFE STAGES AND SUB-STAGES: SUPER'S 1957-1963-1981 FORMULATION.

Figure 3.

CAREER MATURITY: THE BASIC ASSESSMENT

I. Planfulness
- A. Autonomy
- B. Time Perspective
  - 1. Reflection upon Experience
  - 2. Anticipation of the Future
- C. Self Esteem

II. Exploration
- A. Querying
- B. Use of Resources
- C. Participation

III. Information
- A. The World of Work
  - 1. Career Stages
  - 2. Coping Behaviors
  - 3. Occupational Structure
  - 4. Typical Occupations (see B)
  - 5. Access and Means of Entry
  - 6. Outcomes
  - 7. Economic Trends and Change
- B. The Preferred Occupational Group
  - 1. Education and Training
  - 2. Entry Requirements
  - 3. Duties, Methods, Materials, Tools
  - 4. Advancement, Transfer, Stability
  - 5. Working Conditions & Rewards
  - 6. Life Style
  - 7. Future Prospects
- C. Occupational and Other Life-Career Roles
  - 1. Relative Importance of Work
  - 2. Role Relationships and Interactions
    - a) Supplementary
    - b) Complementary
    - c) Competitive or Conflicting
  - 3. Multiple Outlets and Roles for Self-Realization

IV. Decision Making
- A. Principles
- B. Applications
- C. Style

V. Reality Orientation
- A. Self Knowledge
- B. Realism as to Outlets
- C. Consistency of Preferences
- D. Crystallization of Values, Interests, and Objectives
- E. Work Experience

DES March 1982

Figure 4.

A MODEL OF ADULT CAREER ADAPTABILITY

I. Planfulness

- A. Autonomy-Responsibility
  - 1. Educational Planning
  - 2. Occupational Planning
- B. Time Perspective
  - 1. Past: Reflection
    - a. Crystallizing
    - b. Specifying
    - c. Implementing
  - 2. Present-Immediate Future
    - a. Stabilizing
    - b. Consolidating
    - c. Advancing
  - 3. Intermediate Future-Present
    - a. Holding
    - b. Keeping up
    - c. Innovating
  - 4. Distant Future
    - a. Tapering off
    - b. Preparing to retire
    - c. Retiring

II. Exploration

- A. Querying
  - 1. Self
    - a. In Time-Life Stage
    - b. In Space-Roles
  - 2. Situation
    - a. In Time-Organization
    - b. In Space-Life Style
- B. Resources (Attitudes toward)
  - 1. Awareness
  - 2. Valuation
  - 3. Willingness to Use
- C. Participation-Use
  - 1. In-House
  - 2. Community

III. Information

- A. Life Stages
  - 1. Time Spans
  - 2. Characteristics
  - 3. Developmental Tasks
- B. Coping Behaviors
  - 1. Coping options
  - 2. Appropriateness
- C. Available Outlets
  - 1. Organizational
  - 2. Job
  - 3. Occupational
- D. Implementation-Access
- E. Probable Outcomes

IV. Decision Making

- A. Principles
  - 1. Knowledge
  - 2. Valuation
- B. Applications
  - 1. Use in Past
  - 2. Use at Present

V. Reality Orientation

- A. Self-Knowledge
  - 1. Traits
  - 2. Performance
- B. Realism
  - 1. Resources-Access
  - 2. Prospects
- C. Consistency of Preferences
  - 1. Current
  - 2. Over Time
- D. Crystallization
  - 1. Self-Concept Clarity
  - 2. Goal Certainty
- E. Work Experience
  - 1. Floundering vs Stabilizing
  - 2. Stabilizing or Maintaining vs. Declining in Mid-Career

DES August 1981

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Figure 5.

THE CYCLING AND RECYLCING OF DEVELOPMENTAL TASKS THROUGHOUT THE LIFE SPAN

LIFE STAGE	DEVELOPMENTAL TASKS (Sample) in			
(Type of behavior)	Adolescence	Early Adulthood	Middle Adulthood	Late Adulthood
DECLINE	Giving less time to hobbies*	Reducing sports participation	Focusing on essential activities	Reducing working hours
MAINTENANCE	Verifying current occupational choice	Making occ'l position secure	Holding own against competition	Keeping up what is still enjoyed
ESTABLISHMENT	Getting started in a chosen field of work	Settling down in a regular position	Developing new skills	Doing things one has long wanted to do
EXPLORATION	Learning more about more opportunities	Finding opportunity to do the desired work	Identifying new problems to work on	Finding a good retirement spot
GROWTH	Developing a realistic self concept	Learning to relate to others	Accepting one's limitations	Developing non-occupational roles

* Items illustrating developmental tasks are adapted from the Adult Career Concerns Inventory, by Donald E. Super, Albert S. Thompson, and associates at Teachers College, Columbia University, 1981, or from its sources.

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Figure 6.

ACADEMIC CAREERS
Stages, Options, Developmental Tasks, and Decisions

Stage	Task	Option: Administration	Research	Teaching
		Actions	Actions	Actions
Decline	Retire	Move-Stay? Friends?	Continue? Support? Colleagues?	Move-Stay? Friends?
	Disengage	What to drop? How?	What complete? What turn over? What continue?	What to drop? How?
	Specialize	In what? How delegate?	In what? How support?	In what? Support?
Maintenance	Innovate	Can I? How? Support? Do I want to?	Can I still? In what? How? Support?	Can I? How? Support? Do I want to?
	Update	Must I? How? Support?	Do I need to? In what? How?	Do I need to? In what ways? How?
	Hold	Can I? What threat? How meet it?	Is holding enough? How?	Am I good now? Is that enough?
Establishment	Advance or Transfer	Is there room? How advance? To what? How do it?	To what? How?	To what? How?
	Consolidate	How?	How?	How?
	Stabilize	How?	How?	How?
	Try Out	What and How? Support?	What and How? Support?	What and How? Support?
Exploration	Tentative and Trial Exploration are functions of graduate and undergraduate education, including extra-curricular activities particularly for administrative exploration.			

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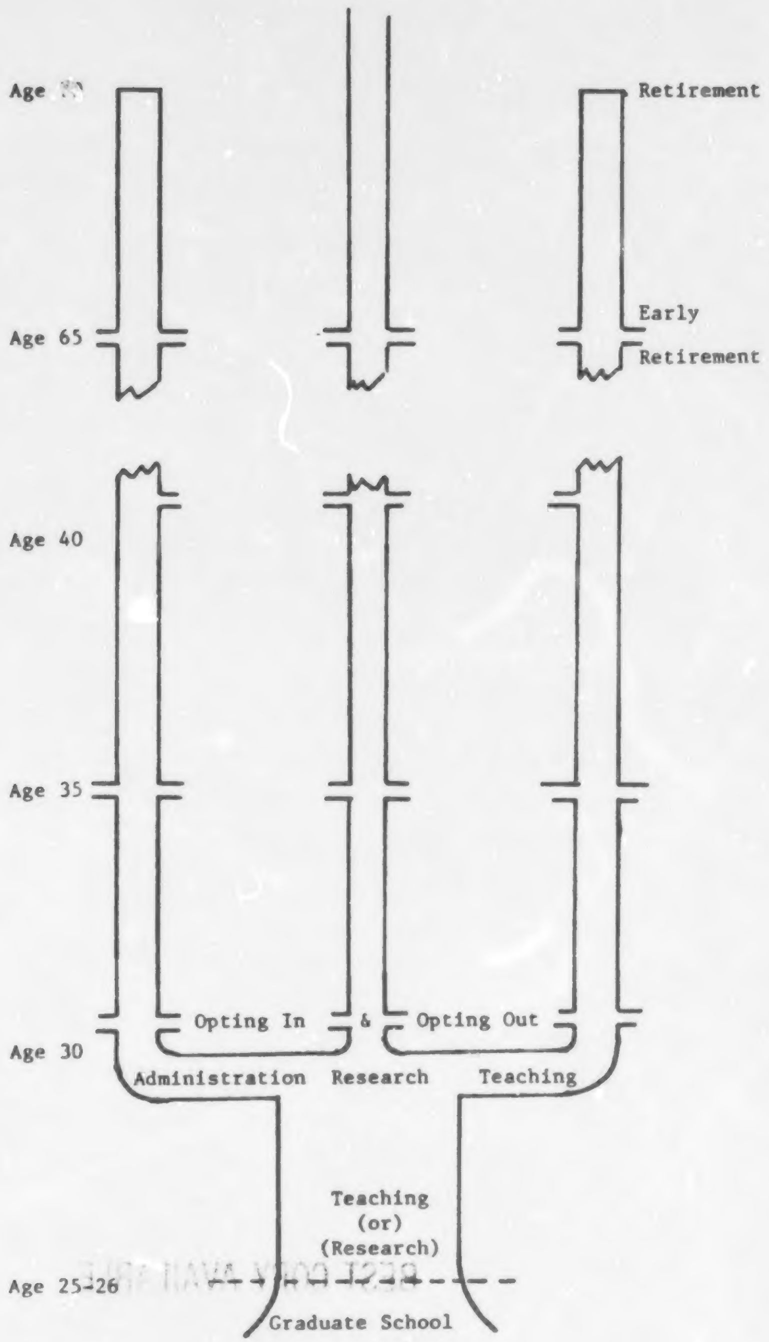
Figure 7.

THE ACADEMIC CAREER DECISION TREE


Age 70
Retirement
Age 65
Early
Retirement
Age 40
Age 35
Age 30
Opting In
&
Opting Out
Administration
Research
Teaching
Teaching
(or)
(Research)
Age 25-26
Graduate School

DES January 1983

Figure 8.

COPING WITH THE DEVELOPMENTAL TASKS OF ESTABLISHMENT

Some Sample Behaviors

Administration	Research	Teaching
Report at Conventions	Report at Conventions	
Chair External Committees Draft Reports Perform Committee Tasks Suggest Content, Methods	Publish: Monographs Syntheses Texts Articles	
Serve on External Committees Draft Reports Perform Committee Tasks Suggest Content, Methods	Sole Author Senior Author Junior Author Collaborator	
Report to the Faculty	Conduct Research	Get Critiques by: Colleagues Students
Report to the Department	Report Research to: Faculty Groups Students Groups	
Chair Internal Committees Draft Reports Perform Committee Tasks Suggest Content, Methods	Collaborate in Research Help Data Collection Help Data Processing Discuss Methods	
Serve on Internal Committees Draft Reports Perform Committee Tasks Suggest Content, Methods		Be Accessible to Students
		Have Courses Well Organized
		Have Assignments Impact: Institution Community The Field
		Teach a Personal Specialty Course
		Teach a Needed Course
		Teach a Basic Course

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Figure 9.

A TENTATIVE MODEL OF CAREER DEVELOPMENT IN THE UPPER GRADES

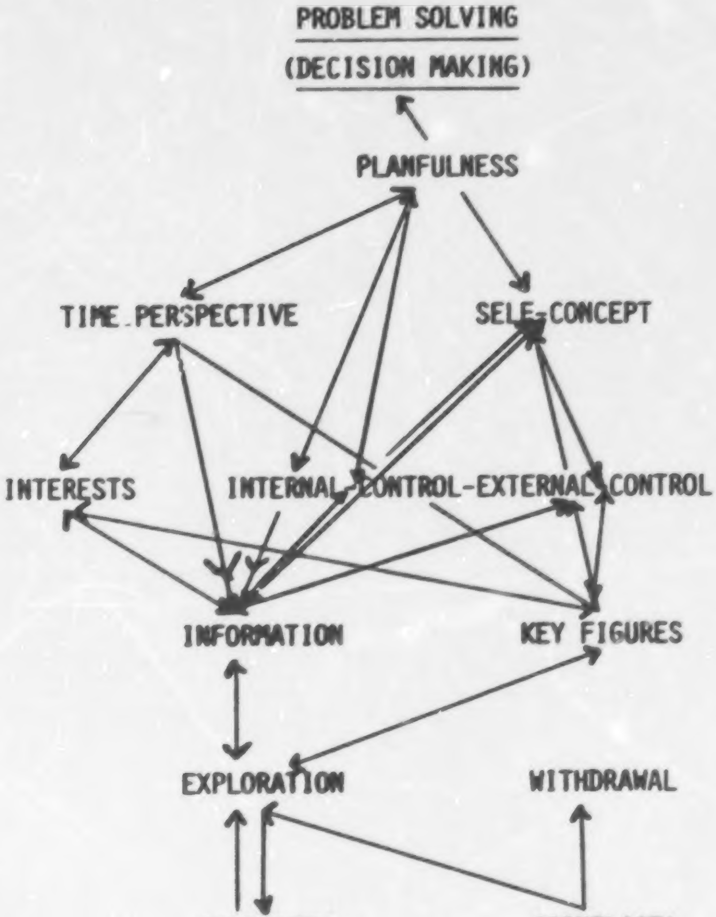
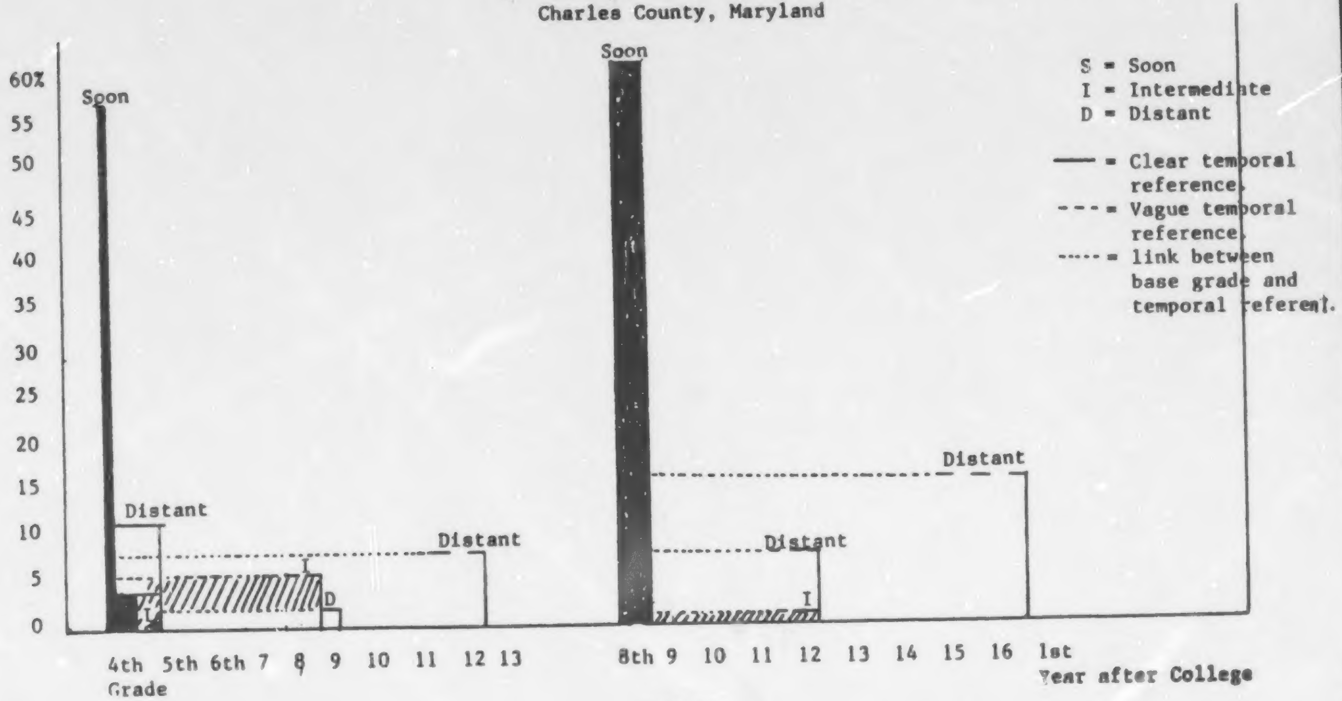

PROBLEM SOLVING
(DECISION MAKING)
PLANFULNESS
TIME PERSPECTIVE
SELF-CONCEPT
INTERESTS
INTERNAL-CONTROL-EXTERNAL CONTROL
INFORMATION
KEY FIGURES
EXPLORATION
WITHDRAWAL
CURIOSITY
(CONFLICT)

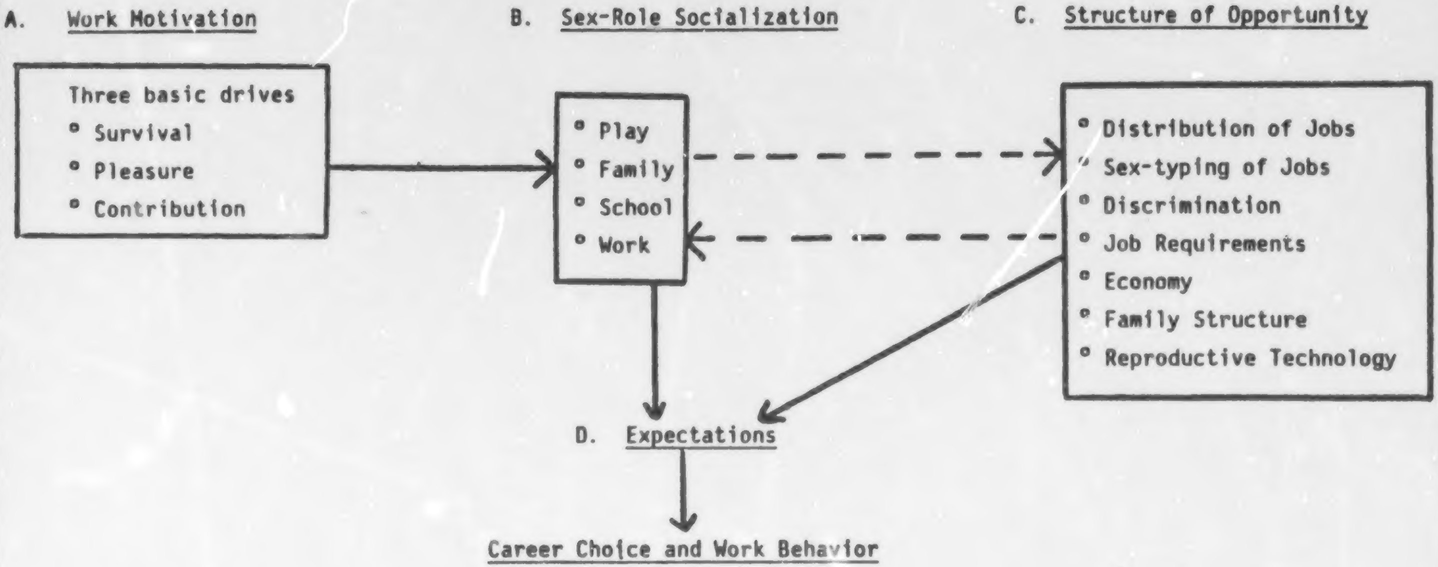
Figure 10.



The Time Perspectives of 4th and 8th Graders
N = 20 Boys and Girls Each Grade
Charles County, Maryland

Figure 11.

A Need-Based Sociopsychological Model of Career Choice and Work Behavior


A. Work Motivation
B. Sex-Role Socialization
C. Structure of Opportunity
Three basic drives
° Survival
° Pleasure
° Contribution
° Play
° Family
° School
° Work
° Distribution of Jobs
° Sex-typing of Jobs
° Discrimination
° Job Requirements
° Economy
° Family Structure
° Reproductive Technology
D. Expectations
Career Choice and Work Behavior

From Helen Astin
The Counselling Psychologist, in press for 1984

Figure 12.

Values Factors
Total (General and Work) WIS Values
N=1728 High School and College Students.

Factors

1 Material

Advancement*

Economic Rewards*

Economic Security*

Environment*

(Life Style)

Prestige*

(Supervisory Relations)

2 Activity and Risk

Physical Activity*

Risk Taking*

Authority

(Creativity)

3 Group Oriented

Aesthetics

Altruism

Associates

Spirituality

Supervisory Relations

Cultural Identity

4 Inner-Oriented

Ability Utilization*

Achievement*

Autonomy *

(Creativity)

Intellectual Stimulation*

(Life Style)

(Participation in Decisions)*

Responsibility*

*denotes loadings of .60 to .79; * denotes loadings of .80 to .90; all others are between .50 and .59. ( ) denote scale appearing in more than one factor.

Principal axis, Equamax rotation, 17% of the variance accounted for.

The Work Importance Study, 1981

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Table 1 Means and Standard Deviations on Salience Inventory Participation and Commitment Scales[a] by Sample

Scale	Secondary students		Tertiary students		Adult Workers	
	$\bar{x}$	sd	$\bar{x}$	sd	$\bar{x}$	sd
Participation						
Student	24.3	6.6	27.6	6.3	25.2	7.8
Worker	21.2	6.1	20.1	6.1	30.3	6.6
Community	16.0	6.6	16.4	6.5	18.2	6.7
Home	23.7	6.4	23.3	6.9	26.4	7.0
Leisure	31.5	5.9	29.0	6.7	27.2	7.4
Commitment						
Student	27.2	7.0	29.0	6.4	25.3	8.8
Worker	29.8	6.4	27.6	7.0	32.6	5.6
Community	20.7	8.1	22.4	8.2	22.1	7.8
Home	30.0	7.3	30.1	7.5	33.4	7.5
Leisure	32.7	6.1	30.9	6.6	29.0	7.7
Approx. N.	430		195		95	

[a] The range of possible scores for each scale was 10 to 40.

Table 2 Standardized Discriminant Function Coefficients[a] for Variables Contributing to the First Function for Each Role by Sample[b]

Activity Group	Studying		Working		Community Service		Home and Family		Leisure	
Year 10 and 12 students (N 380) 1982	Advancement Ability Util. Authority Achievement Altruism Physical Prowess	47 33 29 28 28 -27	Achievement Physical Activ. Social Inter. Advancement Altruism Economics	58 -40 39 30 29 29	Altruism Working Conditions Achievement Risk	87 -60 -36 30	Risk Social Inter. Achievement Authority Work Conditions Aesthetics Prestige	-52 44 40 40 -30 29 -28	Physical Activ. Social Relations Life Style Variety	72 39 36 -34
% var. Can. R.	76.7 0.43		73.8 0.41		70.3 0.47		78.5 0.46		91.9 0.52	
Tertiary students (N 170)	Ability Util. Physical Activ. Achievement Altruism Variety	58 -58 46 36 -33	Ability Util. Physical Activ. Prestige Altruism Economics Social Inter. Variety	71 -64 46 40 34 33 -30	Altruism Cultural Ident. Achievement Life Style Personal Dev.	81 47 -48 -46 36	Altruism Economics Ability Util. Autonomy Advancement	93 84 59 -44 -41	Life Style Physical Activ. Ability Util. Advancement Achievement Prestige	66 56 -53 -51 43 37
% var. Can. R.	89.1 0.64		65.1 0.64		88.9 0.64		69.4 0.59		84.9 0.59	
Workers (N=80)	No significant function		Authority Personal Dev. Prestige Social Relations Autonomy Cultural Ident. Life Style Social Inter. Physical Activ.	77 77 54 50 -49 -47 -41 -40 -37	Social Inter. Autonomy Aesthetics Social Relations Prestige Ability Util. Life Style	97 66 -63 -56 51 37 -37	Physical Prowess Risk Social Relations Autonomy Advancement Prestige Variety Altruism	93 -93 -92 68 -66 66 -56 -42	Ability Util. Autonomy Physical Activ. Prestige Risk Personal Dev.	-102 67 65 51 45 40
% var. Can. R.			83.3 0.74		72.2 0.68		61.6 0.65		72.7 0.74	
Year 10 students (N 590) 1981	Intell. Stim. Spiritual Values Physical Activ. Prestige Authority	48 43 -26 25 22	Part. in Dec. Mkg. Achievement Ability Util. Creativity Eco. Security Authority Advancement	-33 28 26 23 23 22 20	Altruism Spiritual Values Aesthetics Authority Environment	62 36 23 23 -23	Altruism Spiritual Values	62 27	Physical Activ. Associates Responsibility Intell. Stim.	61 25 25 -24
% var. Can. R.	87.2 0.40		85.6 0.40		91.3 0.44		91.4 0.43		87.0 0.44	

[a] Decimal points omitted

[b] Note that the version of the VS used in 1981 was slightly different from that used in 1982

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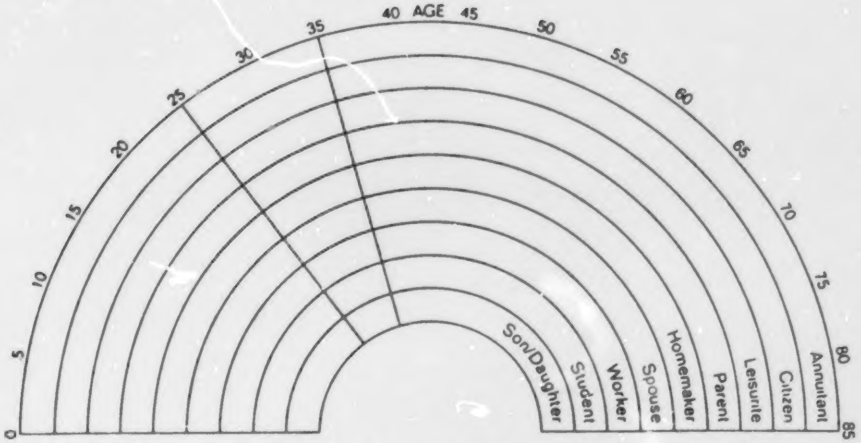
Figure 13.

THE CAREER RAINBOW SUMMARY SHEET
FOR AGES 25-35


AGE
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
Son/Daughter
Student
Worker
Spouse
Homemaker
Parent
Leisurite
Citizen
Annuitant

Assume that you are 25-35 years old, and that you have reached the "Getting Settled" life stage. You may then be spending some time and energy in several or most roles of the Career Rainbow. In the spaces below make a check mark in front of each role that you would like to be playing at that age. Then briefly describe each of your roles as you hope it will be.

___ Son/Daughter ____

___ Student ____

___ Worker ____

___ Spouse ____

___ Homemaker ____

___ Parent ____

___ Leisurite ____

___ Citizen ____

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Figure 14.

A Developmental Assessment Model

Step I PREVIEW
- A. Assembly of Data on Hand
- B. Intake Interview
- C. Preliminary Assessment

Step II DEPTH-VIEW: Further Testing?
- A. Work Salience
  - 1. Relative Importance of Roles
    - a. Study
    - b. Work and Career
    - c. Home and Family
    - d. Community Service
    - e. Leisure
  - 2. Values Sought in Roles
- B. Career Maturity
  - 1. Planfulness
  - 2. Exploratory Attitudes
  - 3. Decision-Making Skills
  - 4. Information: World of Work and Preferred Occupation
  - 5. Realism
- C. Level of Functioning
- D. Field of Interest
- E. Matching and Prediction: the Individual and Occupations

Step III ASSESSMENT OF ALL DATA

Step IV COUNSELLING
- A. Joint Review and Discussion
- B. Revision or Acceptance of Assessment
- C. Discussion of Implications for Action
  - 1. Understanding One's Stage of Development
  - 2. Understanding the Meanings of Work
  - 3. Exploration for Maturing?
  - 4. Exploration for Crystallization?
  - 5. Exploration for Specification?
  - 6. Preparation or Training?
  - 7. Job Search?
- D. Planning Action
  - 1. Follow Through
  - 2. Follow Up

EDUCATIONAL AND VOCATIONAL COUNSELLING IN CANADA

D. Stuart Conger
A talk to the first Spanish Conference on Educational and Vocational Guidance, Madrid, Spain.

Canadians always look to Europe and to the United States for ideas before deciding what they will think and do and therefore, if what I have to say sounds familiar to you and especially if you think that I am telling you about things that you are already doing, please don t be surprised -- just congratulate yourselves that you did it first. If on the other hand you think that there is something different in what I say then I do hope that you will think that it is worth trying in your place.

Planning one's career involves examining one's interests and talents and deciding the most appropriate occupation and then determining the training that one needs in order to qualify for that type of work. As such it is an exercise in optimism.

I say this because to plan for one's future requires that one believes that one does have a future worth preparing for. But many people do not feel that they have a future and indeed many - perhaps 40% of 15 year olds already believe that their lives are failures and the future holds only promises of loneliness, illness, jail, unemployment or poorly paid miserable jobs working with people they don't like. It is not just the world around them that appears to be hostile and painful but equally important - although perhaps I should say even more devastating - is the fact that they are convinced that they have no influence over their own lives.

They see no point in studying because they are convinced that they will still do poorly in school or because they have heard of people who have done well in school and still are failures in life. Often they do not take the necessary steps to establish and maintain good and positive relationships with family, friends, teachers, fellow workers, or supervisors because even when they do try it backfires and they seem to somehow come out the worse for it. At the most, these young people just hope to survive the trials and tribulations in life without too much suffering although they are prepared to accept more suffering than their fair share because they feel guilty about being what they are.

This is a bleak picture but one only has to look at the extent to which many people aged 15 to 25 do things to harm their own lives.

If you like statistics to support an argument you might note that suicide is the second killer of adolescents in America. To this, one might add the statistics on crimes committed by people in this age bracket; and the rate of mental illness, of unwanted pregnancies, of violence, of school dropouts etc. Incidentally, a recent survey in the

United States indicated that 42% of adults have seriously considered suicide, 20-30% have gathered the means of killing themselves, 10-12% have actually tried to suicide and 12 out of every 100,000 population have actually succeeded in killing themselves. In the province of Quebec 29 males out of every 100,000 in the 15-29 age bracket kill themselves. Twice as many young women as men try it but only 1/5 succeed. To these terrible numbers must be added many suicides that are classified as accidental deaths. Therefore, we must recognize that depression is very widespread in our midst.

I said that career planning is an exercise in optimism. I might now rephrase that and say that it is something that only the optimistic will do. But then you might tell me of many young people who do career planning because they are afraid that if they do not do it they will not get a good job. While they may have this anxiety they are still - in my opinion - optimistic because they believe that they can influence their own lives. That is to say that they believe that they can make decisions about themselves and their education and training and their future work. They believe that they can act on - can follow through on - their decisions by gaining access to the appropriate courses, succeed in these courses and then find and get a satisfying and rewarding job.

This is an optimistic view of one's own power and one's own life. It may not be unrealistic for these people because there are a very great number of young people who do become successful in these ways. It is also a testimonial to the faith in oneself that seems to be very important to career planning. Above all, it is a sign that one believes that he or she can and will have a strong influence on his or her own life. In other words one's future is not just in the hands of God, or luck, or friends, or family, or police, or health or other outside forces but the controls over one's life are within one's own management.

For many people this optimism is unrealistic but even so it is good. Let me explain that statement. Many high school students who do careful career planning, select professions that are compatible with their interests, aptitudes, preferred life style, and school marks, are rejected by the university program of their choice because there are several times more candidates than there are training places. Thus the optimistic goal that kept them on a positive track in school, social, recreational and other activities has evaporated and suddenly and unexpectedly they must choose a lesser alternative. The magnitude of this problem can be estimated from the knowledge that for every student accepted in a professional school at university (nursing, medicine, physiotherapy, engineering, architecture, etc.) perhaps 25 are rejected even though they meet the minimum requirements. Often, however, they are accepted in general programs such as arts and sciences and indeed are able to fashion successful plans after a year or so of adjusting to this unexpected environment. The skills that they learned earlier in planning their career are helpful in replanning their lives.

Let us return to the pessimistic and look more closely at their failure to undertake some form of positive career planning but let us look at what happens to them even though they do no career planning and have no idea what type of work they want to do.

Some of these people survive very well and do have very enviable careers. The signs of change seem to take place about the age of 25 (in men) when for some reason they seem to realize that they are doing better than they had expected and can do even better and that they should start to plan for the rest of their working lives. In other words, they suddenly wake up to the possibility that they can control their own careers. This is a very common discovery for a lot of people who, up until about 25 years of age, have been floundering in a series of ordinary jobs.

Now what is it that happens to them that suddenly gives them the self-confidence and the ambition to develop and implement new plans? There are several answers: the demographers would say that age 25 is the average age of men when their first child is born in wedlock. They conclude that the father now realizes his responsibilities more thoroughly and accepts that he must get on with his career. If they are right then they confirm the opinion of some that men's love and concern is greater for their children than for their wives - otherwise the men would have gotten serious about their work when they got married rather than wait until they have children.

Well, as I said, the demographers have one answer but there are other people who have interpretations too. One such is the view that for many people work is the first consistently good experience that they have. Now work is designed to be a good experience. The tasks that are assigned are nearly always easily within one's capabilities, cooperation and teamwork are emphasized, appropriate training is provided, and workers are encouraged to make suggestions. And they have unions to protect them if they think that they are being unfairly treated. Finally, the criteria for success are objective, open and disputable in terms of the quality and quantity of work expected. So you can see that the social system at work is a great deal more positive than that at school or in many homes. Given this situation, one can readily see that there are a lot of positive reinforcements at work that do not happen elsewhere and that these are intended to encourage the worker to do well. It is only natural that many workers in this situation come to think positively of themselves and their potential and then to use the opportunities that do exist to develop their skills and to plan for their future.

You may not agree with what I have just said. You know many people who hate their jobs - but you also know that they know that they can do those jobs very well and that they know that they can also do their bosses' jobs. This, to my way of thinking, is the context within which young workers go through the exploration phase of career development in which they discover more and more about their attitudes, values, knowledge and skills, and find what kind of activities are particularly appropriate for them. It prompts their appetite to extend their talents through work. Thus career planning evolves.

So now we have two types of people engaged in career planning: those students who already have a lot going for them and those adults who are have a good work experience and become encouraged to believe that they have a good future and start to plan for it.

But these two groups do not account for all people by a long shot - perhaps not even one-half.

Let us now consider a very perplexing population. I am thinking of those people who in spite of having acceptable levels of intelligence and other talents seem to do things that cause themselves trouble. They use a variety of self-defeating behaviours that prevent themselves from having satisfactory relationships with others and/or prevent themselves from using help that is available in many ways in their environment. Let me describe the problems that they have but first let me assure you that few people have all of the problems that I will describe - all you need is one or two self-defeating behaviours to seriously hurt your chances in life.

Here is a list that describes the characteristics of many people who flounder in school, family, work and society generally.

1. They do not recognize cause and effect in their everyday actions.
   We all know that if we put our hand on the hot stove that we will get burned. This is cause (put hand on stove) and effect (get burned). But everyone does not realize the cause and effect relationships that exist in social situations. For example some people do not seem to realize that one insult causes another. To be rude to someone is likely going to cause the other person to be rude to you. Or to do a poor piece of work when you promised something better is going to cause the other person to by-pass you when he or she next seeks someone to do something. So if you don't do a good job on one project you may not get a chance to help on another project.
   There are many other examples that you and I can give of cause and effect thinking that somehow escapes some people. They need to develop this coping skill if they are going to be able to do any kind of career planning let alone try to implement any plans.
2. A second self-defeating behaviour that many people exhibit is lack of helping skills.

We are all familiar with people who cannot accept a compliment. You know what I mean because we often see it. For example you may say to a man, "that is a smart suit you are wearing today". Now that is a nice little compliment intended to make him feel good and to build a friendly relationship with him. But what does he reply? "What, this old rag?" Now how do you feel? Are you sorry you were thoughtful? Of course you are, and you are angry at him. But what is the matter with him? Why can't he accept a compliment? Because it is in contradition with his own view of himself that is negative and refuses to acknowledge good in or of himself. This person lacks the helping skills so important in social relationships, in family, school, work and social activities. I am talking about giving others reassurance, encouragement, understanding, respect, trust, companionship - as examples. Helping others in such normally friendly ways are important skills. If we cannot do this, then we are harming ourselves because he or she who cannot help others cannot help themselves - usually because they do not believe that they deserve respect and friendship. Obviously such people do not plan for their future when unconsciously they know that their life is to atone for sins that they have committed by being born and being unwanted - or whatever it is that causes a person to feel unconscious guilt and inferiority.

3. Lack of Self Control
   This is demonstrated through being impulsive, yielding quickly to temptation and prone to reacting when they should think first.
4. Doing what others suggest
   This extends not only to following others' leads but also tending to believe that powerful others, and "pull" or fate are responsible rather than oneself for one's unfortunate circumstances.
5. Thinking in terms of events and not ideas which means that they do not think about human interactions, ethics, rules, etc. and are prone to action rather than analysis. They are also rigid in their thinking such that they have a narrow understanding of what is really happening around them and cannot tolerate ambiguity, as you know ambiguity seems to surround us and someone who can't tolerate this is at a serious disadvantage.
6. Lack of interpersonal cognitive problem solving skills
   These are not the human relation skills that we think of when we talk about social interpersonal problem solving skills but rather they are cognitive or thinking skills used in solving interpersonal problems. For example I refer to the

failure to understand why other people behave as they do; difficulty in even recognizing that a problem exists or when they do so, have difficulty in defining the problem clearly, and most certainly they don't realize the role that they often play in creating problems, they think other people create problems - not themselves. They don't see a range of possible solutions and they don't calculate the consequences of their behaviours.

7. Egocentrism
   They do not understand that other people have different points of view - and indeed that they rather than themselves could be right.
8. Lack of emphatic reasoning
   They seem to be indifferent to how other people think and don't understand their ideas, beliefs or ethics.

It is this population that is seriously inhibited from using help that is available - indeed even from knowing what help it needs because of an inability to define its problems correctly. For example the student who believes that he is not getting good marks in school because the teacher does not like him or her grows into the worker who thinks that the supervisor corrects his or her work because the supervisor does not like him or her is a good example of a person who does not - or cannot - define his or her problems accurately. The poor school grades are not because the teacher does not like him. The grades are a result of his inability or unwillingness to study. Thus incorrectly diagnosing one's problems - and scapegoating are serious self-defeating behaviours. For the reason that they cannot accurately assess their own situation and cannot use appropriate behaviours in many situations, we then know that they must overcome these problems before they can be expected to undertake appropriate career planning.

And how do they overcome such problems? Well one way that seems to be helpful is to provide training in life skills - or coping skills as they are sometimes called. By life skills we mean problem solving behaviours that are applied appropriately and responsibly in the management of one's life. There are 222 of these behaviours which can be grouped into four main categories: problem-solving skills, human relations skills, critical thinking skills and the skills of managing one's personal affairs.

In Canada we have been teaching these skills to students and adults in a few but very divergent programs and have been very pleased with the kinds of results that we get - and the students are pleased - even exhilerated by the skills that they learn.

What is surprising, perhaps, is that these life skills are not necessarily terribly complex or hard to learn. For example, one set of skills that a surprising number of people do not have and for which they suffer badly are the attending behaviours. Can you recall being told to pay attention by a teacher or parent and then being told a second time to pay attention? Or do you recall explaining something to somebody who obviously is not paying attention and then asking them if they understand - and they say they do - but their subsequent behaviour indicates that they did not take in a word? What is often wrong is that they do not know how to pay attention. They do not know that when they are listening to a person they should: (1) face the person (2) look them in the eye (3) relax their muscles (4) ask questions to ensure they understand (5) paraphrase what the other person says to make sure they have understood what is intended (6) make note of "who" "what" "when" "where" data (7) etc. These are simple skills that many of us learn naturally somehow, others of us learn when we train to be counsellors or interviewers. They are essential to everyday life. Just as are problem identification and problem solving skills, other human relations skills and thinking skills. But they can be taught and they can be learned. Life Skills programs are continually being expanded as it becomes evident that they enable people to manage their lives more effectively and constructively.

It is clear that not everyone is ready for the same career planning program at the same age. That is not to say, however, that most people cannot be. Rather it is to say that career planning is not something that you can put people through without giving consideration to the prerequisites. Perhaps I can illustrate this with some examples from clients in the employment service.

I am thinking of people like this:

1) a man who has been sent to 100 job openings but has not been able to get one of the jobs;
2) a person who has very good aptitudes for good paying jobs but always applies only for labouring work;
3) a person who readily admits that he gets mad at his employers and quits after a few weeks working;
4) a person who is sent on a retraining program but drops out in the first 30 days even though the training salary is greater than welfare or unemployment insurance.

Each one of these people needs counselling but none recognizes or admits that he has the need. Why? For the very reasons that they are in problem situtations: they can't define their problem, they don't recognize possible solutions and they can't use help.

The solution would appear to be to train them in the appropriate life and career planning skills. As many don't recognize and acknowledge their shortcomings it is often desirable to include these courses in education and training programs rather than to expect the people to volunteer for the counselling.

There is another type of person who has appeared in large numbers in employment offices recently. I am referring to the person who has been a competent worker for many years but whose employer has had to close the business because of the current economic recession. These people have been good and steady workers for years and many employers would be very pleased to have them but there just are not the jobs at the present time. It would appear that after losing their jobs they go through a psychological progress similar to grieving as when you lose a loved one or even an arm or a leg. Generally speaking this is what happens.

Unemployment is a loss which must be grieved and involves five stages of Denial, Anger, Bargaining, Depression and Acceptance.

These stages may be defined as:

Denial - Thinking that it is not true and that it is a false rumour or a mistake that will be corrected.

Anger - Angry at the employer who has failed you when you have worked so hard for him or her.

Bargaining - This is attempted bargaining with the idea that you will take less pay or produce more if you can somehow keep your job.

Depression - This is a feeling of worthlessness that results from losing a job when one's income, social status and indeed one's self concept are all based upon one's work.

Acceptance - This is the acceptance of the fact that you are unemployed, your job is gone and you have to survive as best you can. Sometimes you become even enthusiastic in this stage to search for a new job.

There is enormous variation in the time and process required to arrive at acceptance depending on individual variables such as self-esteem, age, importance or work to self-image, status of work, etc.

At the acceptance stage, individuals move into a new cycle in which they often become hopeful and energetic about finding new employment. They are open to compromise and to working to find solutions to their present difficulties. Repeated failures to secure employment lead to another painful cycle which is characterized by movement through three stages - 1) Threat to Identity and Stagnation, 2) Crisis and Frustration and 3) Apathy.

It is during these stages that the experience of unemployment appears to prompt increases in family disruption, anger/violence, drug/alcohol abuse, deep depression, etc.

It should also be noted that once apathetic, individuals are more likely to resist attempts to assist (as a defense against further failure) and it becomes much more time consuming to regenerate the enthusiasm and hope necessary for job search.

The acceptance stage appears to be the optimal point for counselling intervention both in terms of client receptivity to assistance and probability of successful outcomes. The stage, however, is often characterized by lack of realism in labour market expectations. Individuals appear to emerge from the depressed cycle with optimism that is not consistent with their abilities, work experience and skills - or with labour market realities. Unassisted in directing this enthusiasm for re-employment into attainable employment goals, individuals essentially set themselves up to burn-out and fail. This appears to apply to all clients but most notably to youth who become discouraged and burn-out quickly.

Those who work through the final cycle of acceptance and have done constructive planning undergo significant transitions even though still unemployed. They are no longer actively job searching but they are more or less at ease with their situations and no longer particularly depressed. Work has taken on less value and importance in their lives and their attitude is that they will never allow work to have such power over their lives and self-esteem again. They are open to working but usually in very different job areas than their training and experience would indicate. They are more independent and relaxed than prior to job loss and they view the learning they have undergone as valuable. But this group is a very small minority.

The majority appear to be stuck in depression and apathy and have become, through the job loss experience, almost unemployable. They have stopped any active job search and were they to be offered job interviews would likely exhibit such discouragement, low esteem and low energy that they would not be hired. These individuals would still like assistance but have stopped believing that assistance will be forthcoming and they no longer seek it. Obviously they are on some program of social assistance but have no intention or motivation to change. The incidence of marriage breakdown, psychosomatic illness and drug and alcohol abuse appears to be very high. They have become ineffective in their ways of dealing with unemployment and this appears to generalize to other areas of life functioning.

The variables which assist individuals to cope with the experience of job loss appear to focus on goal-directed and structured activity and on social and emotional support within the family and the community.

Youth do not seem to learn anthing new about themselves or the labour market as a result of their unemployment. They tend to describe their needs in terms of the need for community and connection with others; the need for structure in their lives and the need for personal meaning through seeing themselves as valued and contributing persons but they do not see that they need to learn and change.

Compassion, empathy and understanding are important but not sufficient variables in assisting individuals to cope. Individuals tend to believe that they alone are experiencing the intensity of loss. Sharing the experience, along with participating in goal-directed activity leads to strong group cohesiveness and resourcefulness for each other. With group support they are able to reduce the intensity of the job loss experience. The assistance required includes three key elements:

Information - on what they are going through and what to expect; practical information on budgeting, handling social situations etc;
Support - from counsellors, family and other support groups;
Structure - goal-directed activities that productively fill up their time.

These are consistent with counselling services which contain three major types of intervention:

Crisis - helping people understand and cope with present emotional realities;
Maintenance - helping people maintain their balance by assisting them with practical issues such as finance;
Developmental - helping people re-group and redefine, if needed, their priorities, their futures and their planning.

Those undergoing job loss and faced with limited if any prospects of re-employment must face very difficult decisions regarding their own futures. They are facing these decisions at a time when they are poorly equipped emotionally to make reasoned decisions.

Increasingly the counselling of victims of job loss recognizes the existence and importance of this grieving process and as a consequence, group counselling programs are now frequently offered when a plant or other business closes down.

The group counselling program usually lasts one week and focuses on planning a new career and learning job search techniques but also - and especially at the first part of the program - does deal with the issue of self-identity. It does this by starting with the self-awareness exercises that one usually uses in career planning in terms of values clarification, skills identification etc. The uniqueness of this program is that the counsellor allows for venting of hostility to the former employer, expression of depressive thoughts and of fear that one may not be able to get another job to continue to support one's family. The counsellor uses these expressions to teach the participants about the grieving process so that they can get a perspective on their own feelings and reinforce the signs that they are proceeding through the process to acceptance and constructive action. A week is a very short time to race through grieving, planning a new career and learning job search techniques. But it is, perhaps, typical of government-sponsored programs that it does have a relatively short duration. It does, however, seem sufficient to be a useful start and for many participants it does serve to give them perspective on themselves and to introduce them to ideas and services that can help them. It also provides information on the various social service, unemployment insurance and other income support schemes that are available.

Obviously career planning is very important to people who have just lost their job because of the closure of their business but it is also obvious that the career planning needs to be preceded by a broader approach to counselling that recognizes the need for working through serious problems of self-identity.

Another type of client often found in employment offices, social service agencies and rehabilitation centres is the person who is considered to be not job ready. It is a very difficult thing to determine whether or not a person is employable or under what circumstances a person who appears to be unemployable would be employable. I think that it would be true to say that under certain labour market or work environment circumstances everyone in this room would be employable. On the other hand, many of the people that we now consider to be unemployable would make very acceptable workers in times when there are severe shortages of workers.

We need only think of the increasing number of disabled people who are now welcome in the work place and for whom some special arrangements have been made to realize how possible it is to become employable without even changing!

It is important, therefore, to have a system of assessing the employability factors of a person against some of the current realities of the labour market. In doing this there are five principal factors that we use to assess the client and to determine the appropriate steps to help him or her become employable. These are:

1. Occupational choice
2. Requirements of the Occupation
3. Job Search
4. Doing well in the Job
5. Personal Needs

Each of these factors is examined in some detail under these main headings. For example Personal Needs are considered in the following areas: finances, transportation, care of dependents, health, physical limitations, housing, legal problems and discrimination. You will recall that these are the last items considered and the first topic is occupational choice. This is an important sequence because we have found that if you start with the Personal Needs you seem to get an impression of all the reasons why the person will have difficulty getting and keeping a job. By starting with Occupational Choice we are starting off on a positive view of the person and we are also dealing with specific issues that relate to preparing for, getting and keeping a certain type of work. Obviously some people whose employability is in doubt need training in life skills before they can proceed with the occupational choice process - but not all by any means.

In reviewing the various types of people that I have described, it becomes clear that there is no one solution to the need for career counselling. Indeed the differing requirements of the people give quite a recipe or set of specifications for the counselling that is necessary for different people. But this should not surprise us at all. I am sure that if we all got the very same medicine everytime that we visited the doctor that a few of us would get better, a few would die and the rest of us would remain sick - or perhaps some of us would get better in spite of the fact that we took the medication. So let's try to identify the types of assistance that are necessary to help meet the career planning needs of the clients that we have discussed. As I said we are not packing the same medicine for everybody but rather just trying to describe the types of counselling processes and tools that should be available to the counsellor to use in ways that he or she thinks are appropriate (in whatever combination) for each individual client or each type of client. So now let's go to the shopping list of counselling ingredients needed by some or all of the clients we have been thinking about:

> For the young who are optimistic about their own future and expect that things should work out well we only need to consider helping them by measuring their interests, aptitudes and other attributes; showing them how these characteristics are valuable to what kinds of occupations; providing information on these occupations (and others that might interest them); helping them priorize the occupational possibilities and to decide which ones to pursue; giving them information on training and education programs that will help prepare them for the occupation, and helping them to decide which programs at which institutions are the most appropriate for them and finally giving them information on the inter-occupational career paths that they might follow to get the appropriate experience to lead to their ultimate goal. This is the most simple career planning system but I will describe some of the components in greater detail a little later. The system must have some potential for confrontation with the client who is perhaps too optimistic and over estimates his or her talents, but other than that, it is a pleasant experience for the counsellor and the client.

Now let us think of the needs of the perhaps equally able student, but one who feels that his or her life is going nowhere, and there is no point in planning for the future because one's future is beyond one's own influence. Many of us in this room believe that this attitude is not unduly pessimistic but is realistic. Indeed as we look at our own careers we can readily recognize the part that luck has played in our lives. To start with, perhaps we feel that we were very lucky to be born into the family which we blessed with our birth. Maybe we were lucky to have certain teachers or others who were especially helpful to us. Maybe we were just in the right place at the right time when a good job opportunity came along. And so on. It is true that luck and outside forces do play an important role in our lives. But I am sure that as you look back on the outside help you can also recall that many of these same helpers and opportunities were not there just for you, but indeed were equally available to others - some of whom did not recognize them as helps and some of whom did not take advantage of them. And as we look back, we might also recognize that there were opportunities that we ourselves could have exploited but failed to do so. We might have also encountered some bad luck but perhaps in this case we did not let it defeat us and we made the best of a difficult situation. I think, therefore, that we can conclude that it is a matter of attitude whether or not we see the world around us in optimistic or pessimistic terms and these attitudes influence how well we take advantage of the opportunities or how well we cope with difficulties. Therefore, there is a need to teach some people the skills of looking positively on themselves, the world around them and using the opportunities, the helps and the helpers that it contains.

This is done in part through the life skills type program that I mentioned earlier and which numbers among its objectives the following:

1. learning the attending behaviours which generate positive reactions from others;
2. learning communication skills to get and give information to and from others without confusion;
3. learning basic relationship skills such as: respect, social conventions, encouraging others, skills of compromising, negotiating and cooperating;
4. learning to recognize one's own feelings, attitudes, interests, beliefs and roles, to recognize other people's influences on these and how to accept and/or modify these characteristics;
5. learning to acknowledge other people's feelings, attitudes, beliefs, without interpreting them as threats;

6. identify the things that one says to oneself that puts oneself down and the things that one can say to oneself that are helpful and positive;
7. consider the feelings of others and adjust one's style of interacting with them.

These skills can be taught and do lead to a more positive view of oneself and more effective skills in coping with difficult situtations and in taking advantage of opportunities. The basic notion here is that we are the architects and builders of our own personalities. This "self-constructionist" idea that we can develop our own personalities is a realistic notion that too few comprehend. I am sure that David Tiedeman will describe it thoroughly tomorrow. It is a necessary pre-requisite for career planning for those people who believe that they are the jotsam and fletsam awash on the sea of life.

Now let us think of the person in his mid-twenties who for the first time realizes that he can and should plan his career. You will recall that these are people who have been drifting from job to job without any particular sense of direction, but now they realize that they can achieve much more if they prepare themselves to do so. In many ways, they are like the first type of client - they are optimistic and have reasonably good interpersonal skills. Therefore, the procedures for formulating occupational goals that were used with the type can be used with them. The big difference, however, is that these clients cannot quit their jobs and go to college or university for lengthy training. Therefore, it is very important that the counsellor have thorough and up-to-date information on two things:

1. part-time training courses and
2. career paths or lattices.

With regard to the first, I might say that surveys done in Canada indicate that the average adult undertakes seven individual learning projects each year. These projects include enrolling in part-time (usually evening) courses and also learning activities in which an individual studies something through reading or obtaining coaching from a friend. For example, I recently bought a small microcomputer and have been learning how to program it by reading books and talking to other people who have similar machines. Our surveys of these individual learning projects indicate that half of them are related to work. This means that a great many people are taking informal training that will help their career development. Some of these people are being provided the training by their employer or by a professional association such as the bankers' association, the credit officers' association, purchasing agents' association etc. It is important that the counsellor of adults be fully informed of all of the training opportunities that do exist for adults and which will help prepare them for future jobs.

The second area of knowledge that is important to have in counselling working adults is that of typical career paths. We do know, for example, that people trained in engineering are frequently appointed to managerial positions in all aspects of business activity (purchasing, personnel, finance, manufacturing etc). They appear to be the most flexible of all occupational groups. We also know that chemists can frequently get jobs as biologists but biologists seldom get jobs as chemists. We also know that skilled factory workers can get jobs in production control, but people who start in production control do not get jobs as skilled workers but might move to cost estimating. It is important to know these routes when you are counselling a working adult on the job that he should prepare him or her self to get next.

More and more employers recognize the importance of providing this type of vocational guidance to their own staff and therefore we do see companies and government departments offering vocational guidance to their employees. Some companies require that employees who take courses at company expense first receive vocational counselling to make sure that the particular course is the most appropriate for the individual workers. Such investments are an important part of the human resource development and therefore the future development of these organizations.

JOB FINDING CLUB PROGRAM

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Workshop Agenda

I General Overview of the Job Finding Club Concept
II Background
III Main Components and Characteristics of the JFC Approach
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I Overview of the Job Finding Club Concept

As its name suggests, the Job Finding Club is a combined effort by its members to help each other find a job. Using the techniques of behaviourism, a counsellor creates an intensive and structured learning situation that provides the members practice of the actual job search process rather than simple advice, discussion and role playing. The goal of the Club is to help all participants obtain a job of the highest feasible quality within the shortest feasible time period.

Job-seekers, under the supervision of a trained employment counsellor, meet in a group of 10 to 12 persons every day for about 4 hours allowing another 2 hours for employer contacts until a job is obtained. The Club generally runs from two to three weeks, with most members finding a job within the first two weeks. A new Club is started up at the end of the three week period. Any unsucessful member is automatically integrated into the newly formed group.

In this approach job-finding is viewed as requiring a number of complex skills which should be learned best in a structured learning situation that emphasizes such learning factors as motivation, maintenance of behaviour, feedback, imitation, and practice. Job counselling is considered as a learning experience which should be taught in a structured and continuing manner until the job is obtained. In addition, the program assists the job seeker in every area that is believed to be influenced in obtaining a job. Assistance is provided for such diverse problems as discouragement in job-seeking, need for family understanding, transportation, peer assistance, professional advice, job leads, preparation of a résumé, interview skills, scheduling of one's time and expanding one's vocational choices.

II Background

The Job Finding Club model originated in the early 1970's with Dr. Nathan Azrin, a behavioural psychologist in Carbondale, Illinois. It was adapted by the Employment Support Services Branch of CEIC for use in Canada Employment Centres and in CEIC-sponsored agencies. A pilot study conducted in the Peterborough Youth Employment Centre in January, 1982 showed that 90 percent of the participants found employment by the end of the three week project. Since then Job Finding Clubs have been set up in approximately 60 centres across Canada. The success rate of these Clubs has ranged from 65% to 93%, with members finding a job after 9 days on the average. Table 1 presents a summary of data obtained from a cross-section of clubs operating across the country.

III Main Components and Characteristics of the Job Finding Clubs

The Job Finding Club has 4 main components:

1. Creating Expectation of Success
   - Evaluation data from previous clubs is presented to help stress the fact that most members who go through the Club the prescribed way generally find a job within 3 weeks.
2. Developing and Sharing of Job Leads
   - job lead: any place a person would like to work
   - non-referalls: clients keep job leads they developed themselves
   - participants exchange job leads they do not plan to follow
3. Utilizing Positive Group Influence
   - Members support and assist each other removing the loneliness and discouragement of the job hunt process
   - information is conveyed more efficiently in groups
   - peers provide valuable modelling influence (e.g. announcing an individual's job offer to the group)
4. Using an Intensive Behavioural Counselling Approach as Characterized by:
   - emphasis on overt behaviour: rather than examining the causes of inappropriate behaviour, tasks are assigned and supervised to correct behaviour

- minimal time devoted to providing information by lecturing; client learns by doing
- directive manner of counselling: counsellor is not viewed as a discussion leader but as a knowledgeable source of encouragement and feedback to the job seekers

Main Characteristics

The Job Finding Club program derives from a field of research known as behaviour therapy, reinforcement therapy, behaviour modification, etc. Whatever the term used, all of these terms refer to the type of counselling in which the emphasis is on:

- standardized procedures
- a directive manner of counselling
- positive statements
- learning small steps at a time
- constant encouragement
- highly structured training procedures
- the final outcome

THE MOST IMPORTANT ASPECT OF THE BEHAVIOURAL METHOD OF COUNSELLING IN THE JOB FINDING CLUB IS THAT THE COUNSELLOR HAS A POSITIVE APPROACH TO THE CLIENT. THE COUNSELLOR SHOULD BE SPENDING MOST OF HIS/HER TIME TELLING THE CLIENTS WHAT THEY HAVE BEEN DOING CORRECTLY AND WHAT POSITIVE PROGRESS THEY ARE MAKING, AND ONLY SECONDARY, PROVIDING INFORMATION.

IV The Counselling Style and Roll of the Counsellor

As I mentioned earlier, in the JFC approach, job counselling is considered as a learning experience which should be taught in a structured and continuing manner until the job is obtained. This would imply that the JFC counsellor's main role is to emphasize those factors that facilitate learning in a controlled environment. There are:

- positive reinforcement (enthusiastic and continuous praise of every correct action).
- multiple reinforcers (not just counsellor's praise, but counsellor arranges for peer reinforcement as well as family support).
- self-recording of behaviour (client records completion of each step e.g. telephone calls, letters, interview and other contacts using progress charts which permits both client and counsellor to observe progress and allows the counsellor opportunity for reinforcing the client's progress).
- teaching in a real life situation (the JFC approach is to arrange for all the necessary activities in job seeking to occur in the club room so that no generalization is needed).

- minimizing effort required (providing materials and facilities needed in the job search).
- reinforcement of component response (i.e., calling employers, searching want ads, writing letters, contacting friends etc ... are prerequisites to the final step of being hired).
- behavioural contracting (arranging a reciprocal relation between client and counsellor [counsellor/job-seeker agreement] to provide a clear understanding of the specific obligations and expectations of each).

V Selection Criteria

No specific criteria for Job Finding Club membership has been used other than a client's availability for full-time employment and an ability to read basic English or French. It is adaptable to persons with a wide range of skills, abilities and education. "...behavioural job counselling in the Job Club excludes no one as being inherently inept or unemployable, but rather accepts all job-seekers as clients, recognizing that each will require different degrees of training. If a client fails to obtain a job within a few weeks, the conclusion is not that he is unemployable but rather that he has not yet acquired the necessary job-finding and job-related skills and that more training is necessary" (Azrin, 1974).

In general, however, due to the operational constraints of most agencies' running clubs, the following basic criteria are often used in selecting prospective members. They should be:

- seeking full time employment
- available and prepared to do a full time job search 6 hour/day for a 3 week period
- job ready
- able to read basic English or French
- amenable to directive approach

VI Example of Behavioural Techniques Applied to Teaching Interviewing Skills

1. Modelling

   First, a videotape of a good model interview is presented to the group. At that time members are given an interview checklist to help guide them in focussing in on specific interviewing behaviours. This allows them to compare privately what they know of their own skills with the quality interview presented on the video.

   Whereas other approaches to teaching, the interview often begins with the counsellor setting up role-playing situations and then telling the client about his/her mistakes. The effect of such an approach may be to put the client on the defensive. He/she may feel that the criticism is unjustified and build up a wall of defensiveness.

2. Imitation

   Second, the counsellor with an assistant will model a second interview using a series of commonly asked questions. This is followed by role-playing exercise in which the group is divided into pairs. Once the members feel comfortable with their interview role-play, they are videotaped. The tape is then played to the group.

3. Selective Reinforcement

   Third, as the taped interviews are played back, the counsellor steps in immediately and verbally reinforces the good portions of the client's interview since most clients demonstrate some techniques which they saw in the model tape.

4. Peer Reinforcement

   In addition, other members of the group are asked to comment on the observed positive aspects of each interview. Much greater reinforcement value for the client is provided by his/her peers than a professional staff member would have. Clients begin to model good behaviours presented by other clients.

VII Facilities and Materials to Operate a Job Finding Club

- client handout forms and Job Finding Club handbooks
- a work area large enough to accommodate 12 club members and 1 or 2 staff
- secretarial assistance (approx. 2 days)
- telephones with 3 or 4 separate lines
- access to photocopying machine and typewriter
- chairs, tables or desks
- videotape recorder
- daily newspaper
- telephone books

VIII Implementing a Job Finding Club Programme

A. Selection and Training of Counsellors

The most important aspect to consider before starting a Job Finding Club Programme is to ensure that the Counsellor who will run the Club has been properly trained. The success of the operation depends largely on the counsellor's attitude, disposition and ability to work in a behaviouristic mode. In the Job Finding Club model, clients look to the counsellor for advice, support and continuous encouragement. The counsellor must be prepared to conduct the sessions in a directive manner and provide for constant supervision and instruction.

B. Orientation Workshop for Job Finding Club Counsellors

Prior to starting a Job Finding Club, counsellors generally undergo a five-day initial orientation workshop. Two staff members (from the agency planning to operate a Club) are urged to attend from each Job Finding Club centre. One member is trained as a senior counsellor and the other as a back-up counsellor. The theory and techniques of the Job Finding Club concept are explained and discussed. Then the participants are given the opportunity to role-play the techniques under the supervision of the course director.

Following the initial workshop, the new Job Finding Club counsellor begins his/her first session with a trained observer present who will give feedback on how well techniques are being handled and assistance in improving these techniques.

C. Scheduling the Job Finding Club

Each Week (Monday-Friday)

Morning Session	9:00-10:15
	10:30-12:00
Afternoon Session	12:30- 2:00
Individual Follow-up on Job Leads	2:00- 4:00

IX Statistical Data Supporting the Job Finding Club Approach

Several employment counselling approaches have been devised to meet the needs of the unemployed, but none seem to have been experimentally evaluated to determine whether they succeed in obtaining employment more efficiently than the job-seeker could have by his/her own effort. The development of the Job Finding Club as a behavioural-based method, on the other hand, was accompanied from its inception by continuing efforts to evaluate its job finding effectiveness according to accepted methods of research design.

In several randomized experimental studies in the U.S., the Job Finding Club has been found to achieve high employment rates (62%-95%) with, respectively, unemployed college graduates and dropouts (Azrin, Flores, and Kaplan, 1975), physically, emotionally, and socially handicapped job-seekers (Azrin and Philip, 1979), and welfare recipients (Azrin and Philip, Thienes-Hontos, and Besalel, 1980). In all cases, the Job Finding Club was considerably more effective in helping clients obtain employment than the comparison treatment (which produced employment rates of 28%-60%). Also follow-up data on the sample of 1,000 welfare recipients in 5 states (Azrin, Philip, Thienes-Hontos, and Besalel, 1981) indicate that of the continuing clients, 80% of the Job Club sample obtained jobs vs 48% of the control sample at the 6 months follow-up and 87% vs 59% at 12 months (See Table 2).

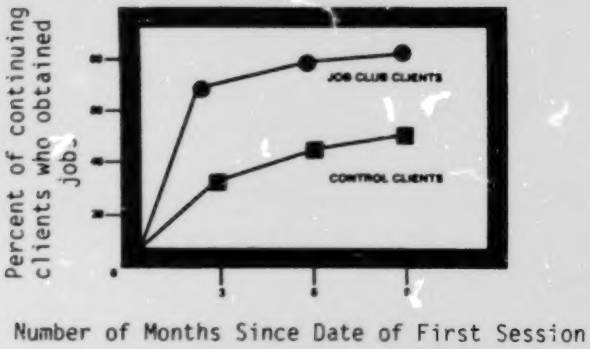
TABLE 1 (JOB FINDING CLUB RESULTS)

CENTRE	CLIENT CHARACTERISTICS	NO. OF CLIENTS	LENGTH OF TIME UNEMPLOYED (IN MONTHS)	AVERAGE NO. OF SESSIONS FOLLOWED	NUMBER OF PLACEMENT	SUCCESS RATE	NUMBER OF CLUBS
Peterborough CEC	Unemployed Youth	146	8.9	10	104	71.2%	20
Scarborouth SYU	Employment Disadvantaged Youth	38	1-24	4-13	31	81.6%	4
New Westminster Outreach	Single Parent Women	78	13	11	63	80%	8
Vancouver CAY Centre	Youth Leaving School System	15	4.4	10	14	93.3%	2
Victoria Outreach	Employment Disadvantaged	71	8.4	12	64	90%	8
Regina CEC	Regular Clientele	22	4.3	8	17	77.3%	2
Charlottetown CEC	Regular Clientele	9	7.1	8.7	6	67%	1
Granby CEC	UI Exhaustees	34	12	9	22	65%	4
Edmonton SYU	Employment Disadvantaged Youth	27	4	8	20	74%	3
Châteauguay CEC	Employment Disadvantaged Youth	32	10.6	10.7	24	75%	3

Table 2

Excerpt from Journal of Vocational Behaviour 4-20-79

Follow Up Data and Job Finding Success for Continuing Clients of the Job Club and Control Sample in Five State Study



X Conclusion

The basic philosphy of the Job Finding Club, which is to help clients find their own jobs, goes a long way in helping to alleviate problems of the chronically unemployed. By learning more effective ways of searching for a suitable job the client can be independent in the future rather than having to rely on temporary solutions.

XI Videotape of a Job Finding Club in Operation

(For a copy of this tape, please contact A. Mills, Advanced Development Division, Employment Support Services, CEIC, Phase IV, 5th Floor, Ottawa/Hull, K1A 0J9).

XII Question/Answer Session and Panel Discussion

(Transcript not yet available).

DEPRESSION IN THE DISABLED ADULT: ASSESSMENT AND INTERVENTION

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Depression occurs frequently among disabled and non-disabled persons alike, and has serious effects on employment. With the expansion of the Royal Ottawa Regional Rehabilitation Centre (RORRC) in 1981, the number of client referrals for psychological services increased considerably and many of these referrals were for the treatment of depression or related problems. Moreover, a considerable number of clients referred to RORRC's Vocational Evaluation Unit (described in Flynn, Vincent, Toulouse and McFarland, 1983) also suffer from depression, which is often necessary to address before vocational rehabilitation can proceed.

The present paper is a deliberately selective blend of our clinical observations and our reading of the relevant literature, and is addressed mainly to practitioners of vocational counselling who work with disabled adults. The paper is structured according to the outline in Figure 1, and consists of six sections: (1) the definition of disability and its distribution in Canada; (2) the nature and diagnosis of depression, and its relationship with unemployment; (3) the relationship between chronic pain (a frequent impairment and cause of disability), depression, and unemployment; (4) the relationship between depression, cardiac impairment (another common cause of disability), and unemployment; (5) a description of the nature and results of a psycho-educational group intervention for depression that we use at our rehabilitation centre; and (6) some general conclusions about the efficacy of psychological treatments for depression and for other vocational problems.

1: Disability in Canada

Disease, Impairment, Disability, and Handicap

The World Health Organization (WHO, 1980) provides a model and set of definitions that are useful in the present context. In the model (see Figure 2), impairment, disability, and handicap are all consequences of disease, especially of chronic disease.

Disease is simply something abnormal occurring within the individual, either present at birth or acquired later. In the case of acute disease, illness often has a sudden onset, is of limited duration, has a course and treatment that are usually well understood, and typically produces few long-term consequences, whether physical, psychological, or social. In the case of chronic disease, on the other hand,

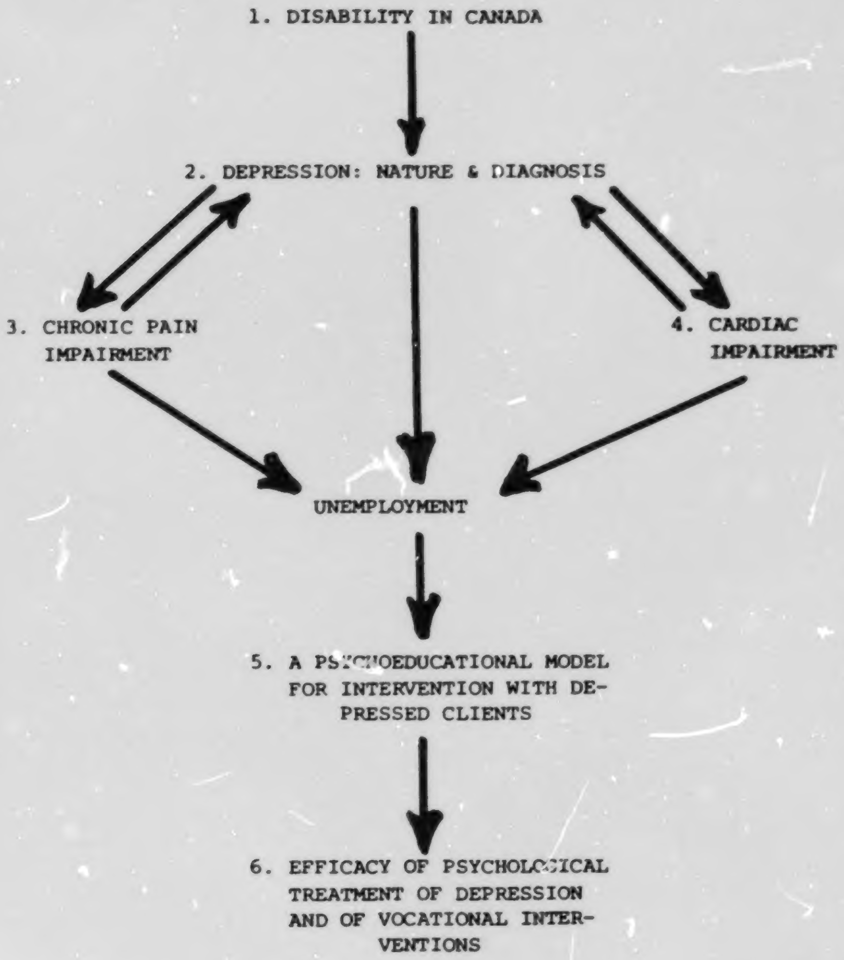

1. DISABILITY IN CANADA
2. DEPRESSION: NATURE & DIAGNOSIS
3. CHRONIC PAIN IMPAIRMENT
4. CARDIAC IMPAIRMENT
UNEMPLOYMENT
5. A PSYCHOEDUCATIONAL MODEL FOR INTERVENTION WITH DEPRESSED CLIENTS
6. EFFICACY OF PSYCHOLOGICAL TREATMENT OF DEPRESSION AND OF VOCATIONAL INTERVENTIONS

Figure 1. Outline of the paper.

illness often has a gradual onset, is often of unlimited duration, has a course and treatment that are frequently uncertain, and usually produces many physical, psychological, and social consequences.

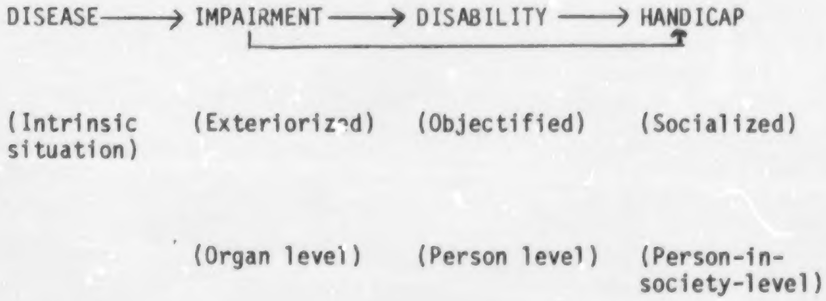
Impairment refers to any loss or abnormality of psychological, physiological, or anatomical function. *Exteriorization* is involved, in that the person concerned becomes aware of the impairment and recognizes that an internal, hidden disease or disorder exists. Impairments are disturbances at the *organ* level, whether or not active disease is still present.

Disability is any restriction (resulting from an impairment) in the ability to perform an activity in the manner or within the range considered normal for a human being. *Objectification* takes place, in that the person's behaviour may be altered as a result of the impairment and/or of the person's awareness of the impairment. Common, everyday activities may become restricted, and the individual may acquire psychological reactions (e.g. depression, "illness behaviours", etc.) to the impairment. Disabilities are disturbances at the level of the *person*, and reflect the consequences of impairments in terms of functional performance and activity by the individual.

Handicap refers to the disadvantage for a given individual, resulting from an impairment or disability, that limits or prevents the fulfillment of a role that is normal for the individual (of a given age, social position, etc.). *Socialization* occurs, in that the individual is disadvantaged relative to others in his/her society, whether psychologically, vocationally, or economically. Handicap is an *interactional* phenomenon, in the sense of being produced only through the encounter of a particular *individual* (possessing an impairment and/or disability) and of a particular *society* (with its specific role expectations).

To make the necessary link with later portions of the paper, *depression*, according to the WHO (1980) model, is a possible (though certainly not inevitable) psychological reaction to an *impairment* (e.g., impairment of cardiorespiratory function, back pain, etc.) which may help to produce a *disability* (e.g., a limitation in walking, in carrying out a marital role, or in working hard) and ultimately a *handicap* (e.g., partial or complete unemployment, diminished social integration, precarious economic self-sufficiency, etc.). If prolonged enough and severe enough, *depression* itself may not be merely a transitory

Figure 2. Model of impairment, disability, and handicap as consequences of disease (World Health Organization, 1980).



psychological reaction to an impairment but may become a long-term impairment of mood that produces additional degrees of disability (vocationally related and other) and handicap (occupational, economic and other).

Disability in Canada

In their report, A Composite Picture of the Disabled in Canada, Walker and McWhinnie (1980) used the WHO model and defined disability as "the effects of conditions or impairments on an individual's ability to perform normal daily activities". Using a wide variety of data sources, Walker and McWhinnie estimated that in 1979, for all age groups 9.8% of Canadians were disabled (10.8% of men, 8.9% of women). Among the working-aged population (15-64), 8.9% of Canadians were estimated to be disabled (9.7% for men, 8.1% for women).

Figure 3 provides a detailed picture of disability in Canada for 1979. It should be noted that of the 1,415,000 disabled Canadians aged 15-64 (8.9% of their age group), 943,000 (67%) were not limited in their major daily activity (labour force participation, keeping house, or going to school). Nevertheless, a large number were either temporarily or permanently unable to work or else were in institutions or sheltered workshops.

Pain and Heart-Related Conditions as Causes of Disability

In this paper, we shall focus on two frequently occurring impairments, chronic pain and coronary conditions, to illustrate the complex relationships that exist among impairment, disability, depression, and unemployment. Walker and McWhinnie (1980) found that pain-related medical conditions such as arthritis and other disorders of the bones and joints, and heart-related conditions such as coronary disease, were major causes of long-term disability

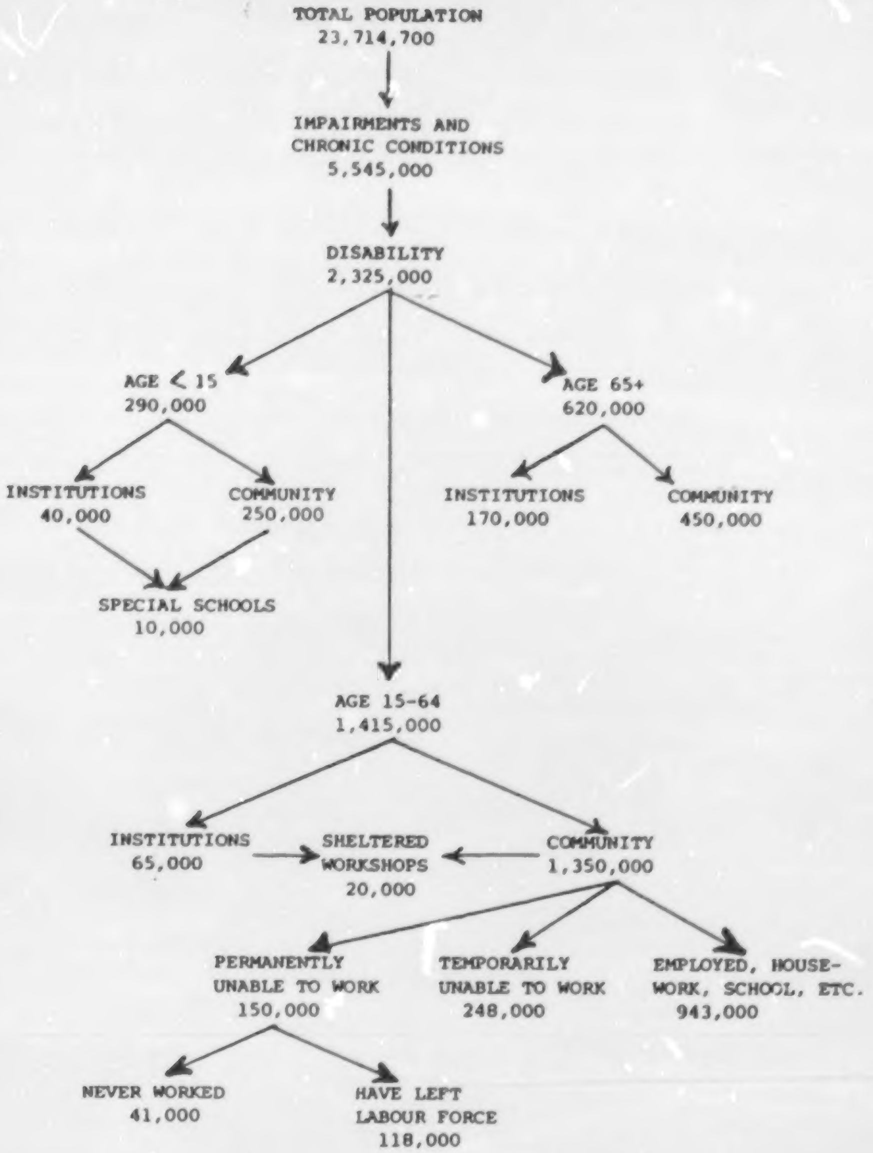

TOTAL POPULATION
23,714,700
IMPAIRMENTS AND
CHRONIC CONDITIONS
5,545,000
DISABILITY
2,325,000
AGE < 15
290,000
AGE 65+
620,000
INSTITUTIONS
40,000
COMMUNITY
250,000
INSTITUTIONS
170,000
COMMUNITY
450,000
SPECIAL SCHOOLS
10,000
AGE 15-64
1,415,000
INSTITUTIONS
65,000
SHELTERED
WORKSHOPS
20,000
COMMUNITY
1,350,000
PERMANENTLY
UNABLE TO WORK
150,000
TEMPORARILY
UNABLE TO WORK
248,000
EMPLOYED, HOUSE-
WORK, SCHOOL, ETC.
943,000
NEVER WORKED
41,000
HAVE LEFT
LABOUR FORCE
118,000

Figure 3. Distribution of disability in Canada in 1979
(from Walker & McWhinnie, 1980)

and high public expenditures. Canadians suffering from arthritis and related disorders and from coronary conditions formed the largest subgroups of disability pensioners in 1979, making up 27% and 18%, respectively, of the estimated 300,000 disability pension beneficiaries in 1979. This is accounted for both by the relatively high prevalence rates of these impairments and by the fact that a relatively high proportion of persons suffering from them end up receiving long-term disability pensions.

Walker and McWhinnie's (1980) data for Canada are broadly consistent with related data from the U.S. Fordyce (1982), citing Snook (1980), reported that 56% of the labour force will ultimately receive treatment for low back pain. Moreover, in industrial settings, chronic low back pain is the single most expensive item in terms of insurance costs, accounting for 36% of annual expenditures for all disability categories (Johnson, 1978). As for cardiac disease, the vocational and economic costs are also very high. DeBusk and Davidson (1980) report that in the U.S., 150,000 persons aged 35-65 and employed outside the home survive a myocardial infraction (MI) each year. At an average cost for treatment of $6,000, these acute MI patients consume roughly $1 billion per year. These figures exclude expenditures on persons with valvular heart disease or those undergoing coronary artery bypass graft surgery.

2: Depression: Nature and Diagnosis

Depression

Depression as an obstacle to employment has not been well studied. Amundson and Borgen (1982) described depression as one of the processes in the phenomena of job loss and job search after unemployment. Within their model, depression is part of the grieving process and is considered a transient phenomenon. Similarly, Lopez (1983) described the depression that he observed in the ex-employees of Braniff International Airways after that corportion became bankrupt. Certainly, this reactive depression as an element within the grieving process in the newly unemployed is something that all vocational counsellors have observed.

However, depression in the unemployed physically disabled individual is often of a different quality. Grief is a common process within rehabilitation but generally it is not a major obstacle to job search and employment. The rehabilitation process for the physically disabled is sufficiently long that grief is resolved before job search even becomes feasible. Rather, the depression that presents an obstacle to vocational pursuits in the physically disabled is a chronic emotional disturbance that is both a personality variable and a life-style dysfunction. Depression in this context has a serious impact upon job search by eroding personal confidence and initiative as well as accentuating and perpetuating physical problems.

Recognition and Depression

While the recognition of depression may seem to be elementary, in fact it is a much more complex task than it first appears. Clients cannot be relied upon to voluntarily report their emotional distress. They may simply not be aware of their own emotional state. Others who do perceive their lowered mood frequently feel so guilty or disappointed with themselves that they avoid spontaneously presenting the situation to vocational counsellors. Even very experienced clinicians fail to recognize depression in their clients. Lehmann (1971) has estimated that only 1 in 5 depressed persons receives the treatment that they require. Clearly, this is an under-recognized problem.

Depression really represents a group of emotional disturbances that have features and symptoms in common. It is more correct to refer to depressions in the plural. This group of depressions causes clients to present themselves in different fashions in a vocational setting. Covino, Dirks, Kinsman and Seidel (1982) have reported that patients with chronic physical illnesses can have any one of 13 different patterns of depression. These patterns vary on degrees of denial of their symptoms, level of self-esteem, level of physical complaints and degree of other emotional difficulties such as anxiety or apathy. Depression can also be conceptualized as having five separate symptoms: mood and affect, cognition, behaviour, social relations, and physical symptoms. A client can be depressed and demonstrate only one of the symptoms but, more commonly, several are present with only one being prominent.

Depression is usually thought of as lowered mood and affect. Feelings of sadness, gloom and despair are usually the first symptoms one thinks of in relation to depression. Such feelings cause clients to be convinced they will never get employment. Lowered self-esteem and attitudes of worthlessness cause clients to feel it is fruitless to search for jobs, as employers would not be interested in them. A sense of futility and helplessness leads them to feel powerless vis-à-vis the general economy and job market. Another sort of mood that stems from depression is anger. Depressed clients can appear angry at everyone in general and present in the interview situation as being defiant or rebellious.

Cognitive or intellectual problems are a second symptom of depression. Clients report memory problems and seem unable to improve their job performance. This symptom really stems from a preoccupation and worry about their perceived inabilities. They fail to concentrate upon tasks and do not hear instructions. Others judge them as forgetful and perhaps lazy.

The client's general behaviour may be a third clue to the counsellor. Depressed people tend to be slow in their movements and responses to questions. They appear to be disinterested or unenthusiastic.

Changes in the client's social relations, either with friends, employers or counsellors, may be a fourth sign of depression. Such individuals withdraw from social contact and avoid scheduled appointments. This feature, combined with a lowered mood, may actually cause an outright fear of rejection in a job interview and thus total avoidance of the interview. They simply do not show up for appointments.

The fifth symptom, increased physical complaints or somatization, is the primary area of concern in this section of the paper. The influence of depression upon somatization has been extensively reviewed by Katon, Kleinman and Rosen (1982a, 1982b). These writers have concluded that as many as 50% of patients utilizing primary-care medical clinics actually have psycho-social precipitants as opposed to bio-medical ones as the main cause of their clinic visit. Depression is the primary emotional disorder found in these medical patients, yet the depressive etiology of their physical complaints is often unrecognized by physicians. Primary care physicians seem to diagnose depression in only .5% to 4.5% of their cases (Reifler, Okomoto, Heidrich and Inui, 1979), yet Katon et al. conclude that approximately 20 to 25% of all clinic patients are depressed. For these reasons, the somatization component of depression is often called Masked Depression. It seems to be hidden from both the client and from the physician. Both parties have their entire focus upon physical complaints rather than emotional factors. The physical symptoms can range from vague complaints of fatigue and weakness to very specific complaints of pain in a specific anatomical area. Sleep disturbance, decreased appetite, and lowered sexual interest are common.

Understanding Depression

A framework for understanding the dynamics of the subtypes of depression can be of assistance to the counsellor in aiding the specific behaviour of job search. The first feature is to view depression as a response to loss. Disabled individuals and individuals that present with medical problems have many losses which they can relate. Most of these losses are tangible in nature, such as financial loss, decreased life expectancy, threats to self-reliance and independence, and a decrease in recreation and social pleasures. Loss can also be intangible. Losses in relation to self-respect, or to feelings of masculinity or femininity, and even anticipated losses in the future such as hopes and dreams, all become part of the internal thought pattern of the depressed. It is in this domain that the depressed person often does not have insight. These losses cause disappointment and this disappointment can be a useful interviewing tool for the counsellor. Exploring the person's perceptions of disappointment often uncovers many of the depressive themes.

A good example of intangible loss is in the coronary-prone or type-A personality. This lifestyle is portrayed by the striving, achievement-oriented, goal-directed individual who feels urgency in completing tasks. This person's entire reward system is in future gains. It is well known that this striving and tension contributes to the heart attack but it also contributes to the subsequent depression and loss of initiative. The myocardial infarction produces a serious threat to the achievement of the person's values and goals and consequently the MI represents a serious loss of future, intangible gains.

A second feature of depression is that the disorder causes an internal quest for self-punishment. The sense of guilt and self-blame that becomes an integral part of depression also causes the person to seek relief from the blame and guilt. The situation is like that of the little child who wishes to get spanked for a misdeed in order that the event be over. Thus, depressed individuals get themselves into situations that cause punishment. They may fail to take care of themselves and comply with medical regimens, thus perpetuating their illness and discomfort. At other times they may take overt action that results in punishment. They may quit their jobs without cause, resulting in financial hardship. Their anger causes them to drive off their friends, wreck their marriage or tell off their boss, all of which perpetuates the depression. The low self-respect that stems from depression produces the idea that harm is justified. Suicide is the ultimate self-harm and it is significant that the incidence of suicide in the physically disabled is three times higher than in the population at large.

A third generalization about depression is a feeling of dependency and helplessness. Depression causes individuals to lose confidence in their abilities and to rely upon others to bolster their sagging self-worth. Thus, it becomes the health care professional's job to make them well and the vocational counsellor's job to obtain employment for them. They may state their good intentions but little effort is put into the pursuit.

The foregoing discussion can be given greater specificity and detail by examining the links between depression and unemployment among particular subgroups of disabled people. We look first at persons suffering from chronic pain, and then at clients with coronary conditions. By implication, we wish to suggest that the discussion is potentially applicable to a much wider range of impairing conditions.

3: Depression, Chronic Pain, and Unemployment

Depression and Chronic Pain

Within recent years, there has been a change in emphasis in professionals' view of chronic pain. Rather than being viewed as a peripheral and physiological disorder, it is now being understood as central and psychological in etiology (Blumer & Heilbronn, 1982). In particular, the role of depression in chronic pain has been recognized. Blumer and Heilbronn argue that depression and pain have common biological underpinnings and hence are related. Others argue that it is a psychological rather than biological phenomenon (Ward, Bloom, & Friedel, 1979). It is not essential for our purposes in this paper to distinguish between these two possible models. It is however, essential that depression be recognized as a major influence in the chronic pain patient and a major obstacle to vocational pursuits.

Chronic pain is generally defined as a pain that persists for more than 6 months without any identifiable physical problem. The economic impact of chronic pain was described briefly in the first section of this paper and it is readily apparent that both the quality of life and the productivity of the worker are greatly diminished.

Reports vary on the incidence of depression in chronic pain patients. For example, Ward et al. (1979) found that 100% of their depressed psychiatric patients complained of some pain syndrome. However they only studied 16 subjects in total. In a much larger study, Delaplane and his colleagues (1978) found that only 38% of 277 hospitalized psychiatric patients reported pain. Other workers (VonKnorring, 1975) have found pain in 60% of depressed patients. When one takes the reverse approach and looks at the incidence of depression in individuals with pain, rates seem to be much higher. Violon (1980) reported that 84% of headache patients and 100% of atypical facial pain patients were depressed.

While it is clear that depression and pain are interrelated, the reported prevalence of depression seems to depend on a number of measurement issues. The definition of depression and of pain causes the populations to be studied to differ. Similarly, the instruments used to measure depression produce differential results.

At the Royal Ottawa Regional Rehabilitation Centre, the Department of Psychology evaluated 34 patients with chronic pain syndromes in 1983. These patients were all low-back pain cases referred to a rehabilitation centre rather than to a psychiatric centre for treatment. Sixteen of the patients (47%) had clinical depression indicated by elevated scores on the MMPI depression scale. A second questionnaire, the Clinical Analysis Questionnaire, categorizes depression into 7 different syndromes. These are hypochondriacal depression, agitated depression, anxious depression, low energy depression, guilt and resentment, and boredom or withdrawal. Only on the first factor, that of hypochondriacal depression, were the pain patients within the abnormal range as a group. Thus pain patients, at least at RORRC, appear to have a specific somatization component to their depression as opposed to other, more psychiatric, syndromes.

Personality Profile

Blumer and Heilbronn (1981, 1982) have suggested that chronic pain patients have a specific psychological profile and lifestyle that they call the Pain-Prone Disorder. This classification is based upon an impressive clinical experience of 900 patients with chronic pain of obscure origin whom they saw between 1962 and 1980. The clinical features of the pain-prone disorder are grouped into four categories. The first is somatic complaints which include continuous pain, hypochondriacal preoccupation and a desire for surgery as an immediate cure. The second group is called "the solid citizen". They deny any psychological conflicts and present an idealized view of themselves and their family relations. They quickly point to a pre-pain tendency towards industriousness and overactivity ("workaholics") as evidence of their stable psychological state. The third category is depression and includes many symptoms such as depressed mood and despair, insomnia, decreased enjoyment of social life, leisure and sex, as well as decreased initiative and activity. The fourth category points to a family history of depression, alcoholism, close relatives with pain or with other physical disabilities. In addition, these individuals display a clear need to be dependent, to be cared for by others, excessive guilt, an inability to cope with anger or hostility, and an overall passive lifestyle.

The picture of the stoic, helpless sufferer with a terrific marriage and life except for the pain, and a past history of overwork, is a familiar picture to vocational counsellors within the Workmen's Compensation field. Blumer and Heilbronn report that the incidence of definite depression in their large series of pain patients is 83%, and advocate that the pain be treated as a depressive disorder with tricyclic medication.

Pain as a Defense Against Depression

In an early paper on psychogenic pain, Engel (1959) observed that some individuals had their depression eased as a result of pain. He suggested that suffering and anguish took the form of pain. By concentrating upon the physical sensation of pain, the individual's focus was diverted by whatever thoughts or events were causing depression and thus he was defended against the suffering of depressed mood. Evidence for this notion began accumulating in the early 1960s when Behan and Hirschfeld (1963) began looking at the psychological state of the individual before accidents and industrial injuries and related it to successful recovery. One of the issues which they identified was a feeling of inadequacy and depression before the accident which contributed to a failure to recover. This notion has been further elaborated upon by Weinstein (1978). He has described a series of stages within the disability process in general that relate to job productivity and self-esteem or depression. Figure 4 outlines these stages. He suggests that there is an initial stage of decreased work productivity and increased tension related to the job, stemming either from work-related problems such as demotion or perhaps from family tension. The worker's self-esteem and sense of self-worth decreases markedly in this stage. A second stage involves an explanatory event such as a work injury. This industrial accident occurs at a time of emotional distress and decreased work productivity and becomes an event the worker can identify to explain both features. Because of the event, the depression lifts and self-esteem increases, but work productivity remains at a low level. The industrial accident and the pain associated with it become a perpetuating event to justify either unemployment or decreased productivity, yet allow the individual to ward off depression and feel good about himself or herself. Most vocational counsellors first become involved with this type of client from 1 to 2 years after the explanatory event and it is only through careful history-taking that the entire process becomes available in a retrospective fashion. The appropriate intervention for the pain and for the depression is to allow the client to understand the circumstances at point A in Figure 4 rather than concentrating on point B. Weinstein's (1978) general model of the disability process may also be helpful in understanding reactions and adjustments to disabilities other than chronic pain.

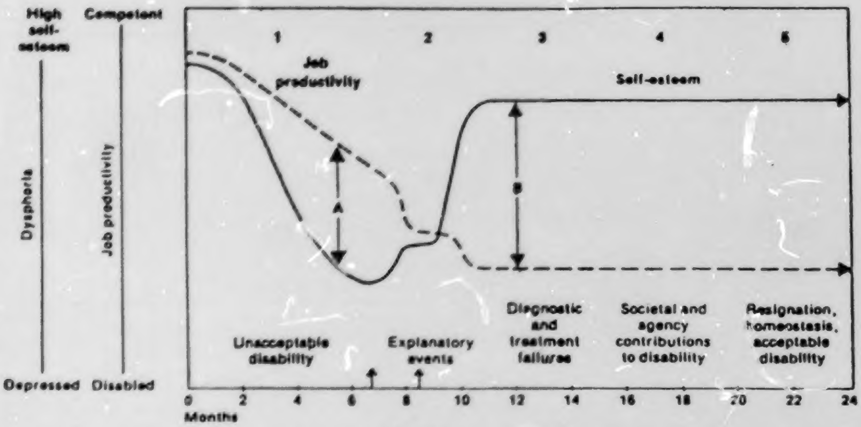
4: Depression, Cardiac Impairment and Unemployment

Cardiac Impairment as Cause and Effect of Depression

As shown earlier in Figure 1, cardiac impairment is both a cause and an effect of depression. That cardiac impairment should be a cause of depressed mood is not surprising. Many studies (reviewed by Doehrman, 1977; see also Wishnie, Hackett, & Cassem, 1971) suggest that depression is very frequent following myocardial infarction (MI). Moreover, depressed MI patients have a poorer prognosis than nondepressed patients (Bruhn, Chandler, & Wolf, 1969). Unfortunately, many studies have not disentangled pre-MI and post-MI depression. At least one study (Taylor, DeBusk, Davidson, Houston, & Burnett, 1981) found a much higher prevalence of pre-MI distress in those post-MI patients deemed to require therapy for their depression than in those judged not to need such therapy. The same study also suggested that an exercise test technician, trained to use a slightly modified form of Hamilton's (1970) interview-based depression rating scale, was more effective in detecting moderate to severe post-MI depression and in identifying patients requiring treatment for their depression than three self-report scales (the Profile of Mood States, the Zung Depression Scale, and the Beck Hopelessness Scale). This is

Figure 4. The disability process (from Weinstein, 1978; reprinted with permission).

Stages in the Disability Process



Stages

1. Crisis build-up
Vulnerable character plus increased job tension (from promotion, demotion, failure, reduced seniority or status, or other change) and/or family tension (with decreased socializing, decreased sexual adequacy) leads to increased somatic complaints, increased physician contacts, increased absenteeism and lateness, decreased productivity, increased irritability, increased blaming, increased depression.

2. Explanatory event(s)
Job-related injury, illness, or other trouble (poor working environment, incompatibility) seen as explanation and sanction for decline in competence and increased dysphoria. Consequences of the event are greater and longer lasting than expected.

3. Stabilization of disability
Diagnosis, treatment, and failure to find a cure add to the explanatory events. Confusion of "impaired" with "disabled" labeling, increased dependency, decreased tension, decreased shame and guilt, avoidance of effective treatment.

4. Crystallization of disability
Decreased expectation of improvement, increased dependency on family and agencies, increased concern over money, increased preoccupation with making the "system" work, incruased defensiveness and anger when "pushed."

5. Chronic incompetence
Loss of all expectation of recovery. New role as "honorably disabled."

A. Crisis build up: Personality difficulties + troubled work-home situation = Unacceptable disability (decreased self-esteem and increased depression)

B. Explanatory event: Unacceptable disability + explanatory event (accident, illness, job environment) = Acceptable disability (increased self-esteem and decreased depression)

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consistent with our earlier comment that depression is complex and often not easily detected.

The reverse hypothesis, that depression can be a cause (and not merely an effect) of cardiac impairment, also seems tenable. Bruhn, McCrady, and Plessis (1968), cited in Appels (1983, p. 27), have provided a vivid description of the process of "emotional drain" which they postulate as a cause of MI and sudden death. For them, emotional drain is a "frustrating, long-term involvement of the individual's mental processes in his attempt to live with, or cope with some life facts or conflict which involved some deeply ingrained aspect of the individual, such as his values, beliefs, self-concept, or interpersonal relationships". The development and consequences of emotional drain are as follows:

> "Emotional drain is felt to begin early in the life of an individual and to accumulate in intensity if no mitigating variables intervene. It is perceived by the individual to be unalterable or unsolvable, regardless of whether it is a conscious or unconscious conflict. Emotional drain implies a nearly constant state of mental preparedness on the part of the individual to cope with his conflict. If additional traumatic incidents arise they become superimposed on an already mobilized organism. Depending upon the meaning to the individual of subsequent events and their duration, they can further drain the energy resources of the body to the point where the total organism is left in a state of physical and mental exhaustion. Emotional drain implies the lack of supportive and meaningful relationships with others. The full impact of emotional drain comes to be realized as a personal burden. Thus, the life-long conflicts that are perceived to be unsolvable to an individual whose mental resources are continually mobilized as if he were attempting to solve them may eventually leave him in a state of mental and physical exhaustion. It is this stage that may set the stage for a MI and sudden death". (Bruhn et al., 1968; cited in Appels, 1983, p. 27).

Appels' (1983) work on the Imminent Myocardial Infarction study in Rotterdam has centered on the relationship between the "vital exhaustion and depression" (VED) syndrome and MI. The VED syndrome is operationalized by means of the Maastricht Questionnaire (MQ), a 50-item, unidimensional scale tapping tiredness, loss of vitality, depression, feelings of helplessness and hopelessness, etc. Appels has found that a patient with an MQ score above the median has 15 times the chance of being diagnosed as in danger of an imminent MI as patients scoring below the median. Appels (1983, p. 25) presents the following case history as illustrative of the links between vital exhaustion/depression and MI:

> Mr. B. is 61 years old. He is married, but has lost his emotional ties to his wife. When she leaves home she never wants to tell him where she goes. He knows that she always goes with another woman to do some shopping and window-shopping but he cannot tolerate the fact that she does not tell him. He had worked as a foreman in a carpenter's yard. He explains that he was famous for his accuracy, his sense of responsibility, and his job involvement. He is very punctual. Each morning he left his home at precisely 7:14 a.m. to catch his bus.
>
> When he was 59 years old he had an accident and had to stop working. This disability was hard to accept as reflected in such comments as: 'Somebody who does not work has lost his respectability'. He struggled with that feeling for almost 1 year. During that year he left his home each day at 7:14 a.m. and took his bus. But after 1 year he started to realize that taking a bus to nowhere was merely self-deception. He became depressed, and often found himself silently crying in his chair. He had the feeling that his energy was slowly ebbing away. Some months after the onset of these feelings he suffered a MI.

For Appels, the psychological state of vital exhaustion and depression is a contributory influence, but neither a necessary nor a sufficient cause, of MI. Rather, he speculates that a somatic predisposition is also required in order for VED to lead to MI.

Henry (1983) complements Appels' (1983) discussion by providing a review of the psycho-endocrine mechanisms that may mediate between psychological states such as VED and diseased heart tissue. He notes, first of all, that clinical evidence supports the idea of a link between depression and coronary heart disease (CHD). It has been found, for example, that patients treated in a mental hospital for depression have higher rates of MI than those with nondepressive symptoms, that medical students at Johns Hopkins University who developed CHD 20-30 years later were from a subgroup that had been vulnerable to depression (Thomas, Ross, & Duszynski, 1975), that widowers have shown a sharp increase in the incidence of CHD during the first six months after bereavement (Parkes, Benjamin, & Fitzgerald, 1969), and that a poor marital relationship was associated with a higher incidence of anginal symptoms of CHD among Israeli civil servants (Medalie & Goldbourt, 1976).

In Henry's (1983) view, the clinically observed links between depression and CHD are consistent with a pattern of hypothalamic pituitary axis overactivity that is typical of the depressed state. Depression appears to be associated with a pronounced elevation of corticosteroid release, and also with the development of auto-immune disease. In future, biochemical research promises to define more precisely the ways in which Appels' VED syndrome leads to cardiac impairment and, in some cases, sudden death.

Some years ago, Hans Selye (1956) proposed a physiological model of how the human body reacts to prolonged frustration and emotional tension. The recent evidence of Appels and Henry with cardiac patients offers support for the third stage of Selye's General Adaptation Syndrome (G.A.S.) which he called "exhaustion". Selye proposed that individuals attempted to adapt to ongoing stress through an initial alarm stage and a second stage of resistance. However, if the psychological or physiological stress continued unabated, the "adaptation energy" of the body would be depleted causing the individual to succumb and die. Appels and Henry have thus provided evidence that one target organ in the exhaustion stage is the heart.

Cardiac Impairment, Depression, and Return to Work

In the cardiac rehabilitation literature, return to work has been frequently studied as an important outcome. In his comprehensive review, Davidson (1983) indicates that patients who are depressed before a cardiac event often remain so afterward and have a slower and less likely return to work. Patients who are anxious or depressed after the cardiac event are three to four times more likely not to return to work than those without clinical evidence of anxiety or depression. Moreover, one prospective study (Stern, Pascale, & Ackerman, 1977) found that 70% of those post-MI patients who exhibited moderate to severe depression in the hospital were still depressed one year later. The same group tended not to return to work, to have poor sexual functioning, and had a higher rate of readmission to hospital. Overall, then, it seems likely that early treatment of psychological problems such as depression can make a major difference in the degree to which work is resumed. This is a major assumption that we are in the process of testing, both clinically and in a research-based fashion, in the cardiac program at the Royal Ottawa Regional Rehabilitation Centre. The same assumption was also one of the reasons why we implemented the psycho-educational intervention for depression that we discuss next.

5: A Psycho-educational Treatment Group for Unipolar Depression

Rationale for the Intervention

With our expanded case load in 1981, following RORRC's expansion, it became apparent that we needed a group intervention for depression, one that would be effective, suitable for a wide variety of RORRC clients, and relatively brief and efficient. Following a review of the literature on methods commonly used for the treatment of depression, we concluded that Lewinsohn's social learning model (Lewinsohn, Antonuccio, Steinmetz, & Teri, 1982) best suited our needs.

Peter Lewinsohn, Professor of Psychology at the University of Oregon, initiated his works on depression in 1965. By 1978, he and his colleagues had elaborated a psycho-educational intervention model for unipolar depression, in the form of a 10-week course entitled "Coping with Depression".

Lewinsohn's approach is cognitive-behavioural in nature, and is based on social learning theory (Bandura, 1977). According to this stimulus-cognition-response model, normal and abnormal behaviour are learned phenomena, influenced by and influencing person-environment interactions. "In the social learning view, people are neither driven by inner forces nor buffeted by mental stimuli. Rather, psychological functioning is explained in terms of continuous reciprocal interaction of personal and environmental determinants" (Bandura, 1977, p. 11).

In line with this interactionist perspective, emotional disorders (including depression) are not the results of inner conflicts but instead are essentially learned. In the case of depression, the maladaptive learning is associated with a decrease in pleasant and an increase in unpleasant person-environment interactions.

Reinforcement, defined by the quality of a person's interaction with the environment, is central to the social learning model of depression. A low rate of positive reinforcement is assumed to cause dysphoric mood. Moreover, it is assumed that the behaviour of depressed persons does not lead to an adequate level of positive reinforcement, which, in turn, maintains the depressed mood. Finally, the depressed person often encounters a relatively high rate of punishing, aversive experiences, which is also causative of the dysphoric mood.

The course teaches clients the skills needed to overcome their current depression and to prevent future depressive episodes. That is, clients are taught to understand, unlearn, and relearn (change) the key behaviours and/or cognitions causing their depressed mood.

Behaviours associated with alleviating depression, i.e., those on which the course focuses, include the following: 1) improving social skills; 2) increasing pleasant activities; 3) relaxation training; 4) time management; 5) problem-solving; and 6) positive thinking. Taken individually or in combination, each of these strategies has proven effective in the treatment of depression.

Lewinsohn et al. (1982) identify the critical components of successful short term cognitive-behavioural therapy for depression as follows:

1. Therapy should begin with a well articulated rationale. This rationale should provide the initial structure that guides the client to the belief that he or she can control his or her own behaviour and therefore his or her depression.

2. Therapy should provide training in skills which the client can utilize to feel more effective in managing his or her daily life. These skills must be of significance to the client and must fit in with the rationale that has been presented.
3. Therapy should emphasize the independent use of these skills by the client outside of the therapy context and must provide enough structure that the attainment of independent skills is possible.
4. Therapy should encourage the client to attribute improvement in mood to his or her increased skillfulness and not to the therapist's skillfulness.

It is these assumptions upon which the Coping with Depression course is based and which it attempts to operationalize.

The course consists of 12 2-hour sessions spread over a period of 10 weeks. Two additional follow-up sessions, called class reunions, take place 1 month and 6 months after termination of the course. The purpose of these two class reunions is to assess clients' progress and to encourage them to maintain the gains they achieved during the course by continuing to use their new behavioural and cognitive skills.

A primary therapist is responsible for leading a particular session and is assisted by a co-leader. The two co-leaders take turns leading sessions during the course.

Lewinsohn et al. (1982) suggest that the group be composed of 6 to 8 participants. Although a group format is most cost-effective, the course can also be offered on an individual basis and can even be followed by clients at home with phone contact with a therapist.

In leading our first group, we realized the importance and impact of group dynamics. Participants were very supportive and helpful to each other. Between sessions, they called each other and participated in activities together. Another favourable aspect of the group format is a reduction in the risk of therapist burnout. Although few objective data have been gathered on this topic, it seems that therapists find stimulation and challenge in the group process.

Admission Criteria

Prior to admission to the course, each client is seen for an interview and is administered several standardized assessment instruments. Exclusion criteria are kept to a minimum and serve the purpose of ensuring that the client will function well in the group and will be able to benefit from a psycho-educational approach.

To be admitted, the individual has to present the clinical symptoms of depression and appear from mildly to severely depressed on the Beck Depression Inventory, the Symptom Checklist-90-Revised, and the Clinical Analysis Questionnaire. Scores derived from these tests also serve as a pre-test against which progress is monitored, and are readministered at the end of the course and at follow-up. Clients with biopolar depression are excluded. However, neither concurrent drug treatment for unipolar depression nor individual therapy constitute reasons for exclusion. Finally, the client must not present thought disorders, psychosis, acute schizophrenia, organic brain dysfunction, or mental retardation, and reading comprehension must be at a grade 7-8 level. Motivation is also a significant factor that needs to be evaluated during the initial interview. The client has to be prepared to participate actively and to sustain efforts throughout the 10 weeks of the course.

Content of Course Sessions

Session #1. The first session is especially important as it establishes the ground rules for the rest of the course. The first ground rule is that the group is not allowed to talk "depressed". Rather, positive, constructive, task-oriented work focusing on mastering new abilities and skills is encouraged. The importance of being precise and concrete in comments and discussions is stressed.

Once these rules are understood, the leader then presents the basic assumptions of the social learning theory of depression. Toward the end of the session, homework assignments are explained.

The material used for the course is usually provided before the first session. Each participant receives a folder containing the following:

- A course plan;
- A summary of each session;
- Data collection sheets; and
- A detailed description of homework assignments.

Each participant must also have a copy of Control Your Depression by Lewinsohn, Nunoz, Youngren & Zeiss (1978). Although the book was originally designed as a self-help book, it is intimately linked to the course. The course frequently refers to sections of the book and participants are required to read chapters dealing with a given topic before the session that focuses on that topic.

Session #2. This session deals with self-change techniques. The steps needed in developing a self-change plan are: 1) specifying the problem and deciding what to change; 2) self-monitoring; 3) discovering antecedents; 4) discovering consequences; 5) setting goals; 6) contracting and reinforcement; 7) putting the finishing touches on the plan; 8) evaluating progress; and 9) stopping the program. As a homework assignment, the client is required to build a self-change plan. This session is particularly important as it teaches a basic skill which will be used in all of the remaining sessions.

Session #3. This session focuses on tension and anxiety-related problems and introduces relaxation training. The instructor emphasizes the importance of regular practice. The homework assignment following this session consists of monitoring one's tension level and identifying particularly stressful situations.

Session #4. The fourth session deals with applying relaxation to stressful, difficult situations. Covert and "portable" relaxation techniques are discussed. The homework assigned involves monitoring one's tension in problem situations and practicing relaxation.

Session #5. During this session, work on pleasant activities and mood begins. The lecture focuses on the relationship between one's level of activity and one's mood. Participants are asked to observe and record the number of pleasant activities they engage in each day, and to rate their daily mood on a scale of 1 to 10. At the end of a week these data are placed together on the same graph, enabling participants to see the relationship between their mood and their level of pleasant activities.

Session #6. Session 6 continues with the subject of pleasant activities, requiring that clients develop an intervention plan to increase their level of activities in order to attain a balance between pleasant, neutral, and negative activities. Mood continues to be monitored, permitting clients to appreciate how a balance in type of activities affects mood.

Session #7. This session discusses the effect of negative thinking on mood. Ways of changing negative cognitions are also presented.

Session #8. Session 8 continues the work on cognition started in session 7. In addition, self-instructional techniques are introduced as a supplementary cognitive strategy.

Session #9. This session deals with assertiveness training. The instructor discusses typical problems encountered by people suffering from depression. Modeling and role-playing are used to illustrate assertive behaviour.

Session #10. Session 10 presents the idea that a low level of social interaction often results when there is inadequate stimulation or inadequate rewards. Participants discuss what they need to do in order to increase their level of activities. Specific individualized plans are developed and applied outside the sessions.

Session #11. Session 11 begins the process of wrapping the course up and planning for maintenance of the progress achieved. Each participant proceeds with a review of the topics covered during the course and assesses areas which need further work. By the end of this session, participants should have a good idea of how to proceed in emergency situations.

Sessions #12. The first part of the last session is devoted to developing a personalized life plan. The rest of the session is spent discussing participants' gains. The instructor emphasizes that continued improvement and maintenance of gains are more likely to occur if participants continue to use the coping skills they have learned in the course.

Research on the Effectiveness of the Coping with Depression Course

Since 1979, Lewinsohn and his colleagues have conducted the course with over 300 depressed persons. Research has clearly demonstrated that group participants show significant improvement in their level of depression and that gains are maintained at 1 and 6 months after treatment.

At RORRC, we started using this approach in October, 1983, with a group of 5 clients, and are currently running a second group. The results obtained with our first group of clients are presented in Table 1.

Our pilot findings are similar to those of Lewinsohn and his colleagues. We are encouraged by our initial results and we intend to continue running the group on an ongoing basis. Some minor modifications to the format and materials will be made, however, to better suit the population we serve at RORRC.

6: Efficacy of Psychological Treatment of Depression and of Vocational Interventions

Effectiveness of Psychological Treatment of Depression

The reasonably optimistic, albeit very tentative, evidence we have just presented on the efficacy of Lewinsohn's pyscho-educational group intervention for depression is consistent with a recent meta-analysis of the research literature conducted by Steinbrueck, Maxwell and Howard (1983). Steinbrueck et al. wished to find out how psychotherapy compared with drug treatment in terms of effectiveness for adults with unipolar depression. Their extensive literature search uncovered 56 studies which examined either psychotherapy or drug therapy, were experimental in design, and used a control group. Their most important finding was that the mean "effect size" (treatment mean minus control mean, divided by the control standard deviation) for psychotherapy was 1.22, exactly twice as large as the mean drug therapy effect size of .61. Steinbrueck et al. (1983) also found psychotherapy to be more effective than the most frequently used antidepressant drugs, the tricyclics (mean effect size of .67). There were no statistically significant differences in effect sizes among the types of psychotherapy used (cognitive, behavioural, marital, and "other"). Hence, counsellors working with depressed persons should be encouraged that their psychological interventions can, indeed, be fruitful.

Table 1

Scores on the Beck Depression Inventory for the 5 Participants in the Initial "Coping With Depression" Course at RORRC (1983)

Participant No.	Beck Pre-Treatment	Beck Post-Treatment	Beck at 1-Month Follow-up
A	37	9	8
B	25	19	16
C	18	17	18
D	31	12	5
E	18	32	--[a]
Group Mean:			
a) *With* No. E:	25.8	17.8	11.8
b) *Without* No. E:	27.8	14.3	11.8

[a] Client E did not show up for the 1-month follow-up assessment.

Effectiveness of Vocational Interventions

Holland, Magoon, and Spokane (1981) suggest that four factors underlie effective career interventions: (1) exposure to occupational information; (2) cognitive rehearsal of vocational aspirations; (3) acquisition of a cognitive structure for organizing information about the self, occupations, and their interrelationships; and (4) social support and reinforcement from a counsellor or other participants. Research on the effectiveness of vocational interventions has been growing exponentially, from very few studies in 1948-1950 to more than 130 during 1978-80 (Spokane & Oliver, 1983).

How effective are such interventions? Spokane and Oliver (1983) have performed a major service with their meta-analysis of the relevant literature. They searched the literature during 1950-1980 for studies involving vocational interventions or employing vocational outcome measures, and located 52 that had a control group in addition to one or more experimental groups. (Unfortunately for purposes of the present study, studies with handicapped subjects were excluded). Spokane and Oliver calculated effect sizes in the same way as did Steinbrueck et al. (1983): the experimental group mean minus the control group mean, divided by the control group standard deviation.

The results of Spokane and Oliver's (1983) meta-analysis are very encouraging and, in what we see as a fitting end to our paper, we quote their three major conclusions directly:

"Conclusion 1. The outcome status of the average client receiving any type of vocational intervention exceeded that of 80% of untreated controls" (Spokane & Oliver, 1983, p. 108). The overall mean effect size for vocational interventions was .85, identical in magnitude to the mean effect size of .85 for psychotherapy reported in the meta-analysis by Smith, Glass, and Miller (1980).

"Conclusion 2. The outcome status of the average client receiving group/class interventions exceeded that of 87% of untreated controls" (Spokane & Oliver, 1983, p. 118). When group treatments (i.e., supportive group, structured workshop, or class intervention) were analyzed separately (28 studies), a mean effect size of 1.11 was found. This effect size was larger than that for individual interventions (.87) or for vocational interventions taken as a whole (.85). Spokane and Oliver speculated that group treatments were more effective than individual ones because they may be more intensive (i.e., involving more sessions and/or more hours), more comprehensive, and/or more specifically geared to the outcome measures used.

"Conclusion 3. The outcome status of the average client receiving individual vocational interventions exceeded that of 81% of untreated controls" (Spokane & Oliver, 1983, p. 119). In the 20 studies involving a counsellor interacting with an individual client, the effect size was .87. Although smaller than the effect size for group interventions, this effect size was considerably larger than that (.34) found for 12 studies which employed neither group nor individual treatments. These "alternative" treatments included computer-assisted interventions, audio-taped treatments, career education or curricular interventions, self-directed decision training, and self-administered interest inventories. Spokane and Oliver drew no conclusion about this small and disparate set of alternative treatments, but added that they are typically brief and have a modest impact that may be sufficient for many clients.

REFERENCES

Amundson, N.E. and Borgen, W.A. (1982). The dynamics of unemployment: Job loss and job search. Personnel and Guidance Journal, 60, 562-564.

Appels, A. (1983). The year before myocardial infarction. In T.M. Dembroski, T.H. Schmidt, & G. Blumcher (Eds.), Biobehavioural bases of coronary heart disease (pp. 18-38). Basel: Karyer.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, N.J: Prentice-Hall.

Behan, R.C. and Hirschfeld, A.H. (1963). The accident process: II. Toward more rational treatment of industrial injuries. Journal of the American Medical Association, 186, 300-306.

Blumer, D. and Heilbronn, M. (1981). The pain-prone disorder: A clinical and psychological profile. Psychosomatics, 22, 395-402.

Blumer, D. and Heilbronn, M. (1982). Chronic pain as a variant of depressive disease: The pain-prone disorder. Journal of Nervous and Mental Disease, 170, 381-406.

Bruhn, J.G., Chandler, B., & Wolf, S. (1969). Psychological study of survivors and nonsurvivors of myocardial infarction. Psychosomatic medicine, 31, 8-19.

Bruhn, J.G., McCrady, K.E., & Plessis, A. (1968). Evidence of 'emotional drain' preceding death from myocardial infarction. Psychiatric Digest, 29, 34-40.

Covino, N.A., Dirks, J.F., Kinsman, R.A. and Seidel, J.V. (1982). Patterns of depression in chronic illness, Psychotherapy and Psychosomatics, 37, 144-153.

Davidson, D.M. (1983). Return to work after cardiac events: A review. *Journal of Cardiac Rehabilitation*, *3*, 60-69.

DeBusk, R.F., & Davidson, D.M. (1980). The work evaluation of the cardiac patient. *Journal of Occupational Medicine*, *22*, 715-721.

Delaplane, R., Iffabumayi, O.I., Merskey, H., & Zarfas, J. (1978). Significance of pain in psychiatric hospital patients. *Pain*, *4*, 361-366.

Doehrman, S.R. (1979). Psychological aspects of recovery from coronary heart disease: A review. *Social Science and Medicine*, *11*, 199-218.

Engel, G. (1959). Psychogenic pain and the pain-prone patient. *American Journal of Medicine*, *26*, 899-918.

Flynn, R.J., Vincent, D.R., Toulouse, L., & McFarland, T.M. (1983). In Employment and Immigration Canada, *NATCON 6 (National Consultation on Vocational Counselling, Vol. 6*, pp. 165-209). Ottawa: Minister of Supply and Services Canada.

Fordyce, W.E. (1982). A behavioural perspective on chronic pain. *British Journal of Clinical Psychology*, *21*, 313-320.

Hamilton, M. (1970). A rating scale for depression. *Journal of Neurology, Neurosurgery, and Psychiatry*, *23*, *56-62*.

Henry, J.P. (1983). Coronary heart disease and arousal of the adrenal cortical axis. In T.M. Dembroski, T.H. Schmidt, & G. Blumchen (Eds.), *Biobehavioural bases of coronary heart disease* (pp. 365-381). Basel: Karyer.

Hirschfeld, A.H., and [illegible], R.C., (1963). The accident process: I. Etiological considerations of industrial injuries. *Journal of the American Medical Association*, *186*, 193-199.

Holland, J.L., Magoon, T.M., & Spokane, A.R. (1981). Counselling psychology: Career interventions, research and theory. *Annual Review of Psychology*, *32*, 279-305.

Johnson, A.D. (1978). *The problem claim: An approach to early identification*. Olympia: State of Washington Department of Labor and Industries.

Katon, W., Kleinman, A., and Rosen, G. (1982). Depression and somatization : A review, I. *American Journal of Medicine*, *72*, 127-135.

Katon, W., Kleinman, A., and Rosen, G. (1982). Depression and somatization: A review, II: American Journal of Medicine, 72, 241-247.

Lehman, H. (1971). Epidemiology of depressive disorders. In R.R. Fieve (Ed.), Depression in the seventies. Princeton: Exerpta Medica.

Lewinsohn, P.M., Antonuccio, D., Steinmetz, J., & Teri, H. (1982). The coping with depression course: A psycho-educational intervention for unipolar depression. University of Oregon, Department of Psychology.

Lewinsohn, P.M., Munoz, R.F., Youngren, M.A., & Zeiss, A.M. (1978). Control your depression. Englewood Cliffs, N.S: Prentice-Hall.

Lopez, F.G. (1983). The victims of corporate failure: Some preliminary observations. Personnel and Guidance Journal, 61, 631-632.

Medalie, J.H., & Goldbourt, U. (1976). Angina pectoria among 10,000 men. II. Psychosocial and other risk factors as evidenced by a multivariate analysis of a five-year incidence study. American Journal of Medicine, 60, 910-921.

Parkes, C.M., Benajmin, B., & Fitzgerald, R.G. (1969). A broken heart: A statistical study of increased mortality among widowers. British Medical Journal, i, 740-743.

Reifler, B., Okomoto, J., Heindrich, F. and Inui, T.S. (1979). Recognition of depression in a family medicine training program. Journal of Family Practice, 9, 623-628.

Selye, H. (1956). The stress of life. New York: McGraw-Hill.

Smith, M.L., Glass, G.V., & Miller, T.I. (1980). The benefits of psychotherapy. Baltimore: Johns Hopkins University Press.

Snook, S.H. (1980). Low back pain in industry. Workshop on idiopathic low back pain. American Academy of Orthopedic Surgeons, Miami Beach, December 8-10.

Spokane, A.R., & Oliver, L.W. (1983). The outcomes of vocational intervention. In W.B. Walsh & S.H. Osipow (Eds.)., Handbook of vocational psychology (Vol. 2, pp. 99-136). Hillsdale, NJ: Erlbaum.

Steinbrueck, S.M., Maxwell, S.E., & Howard, G.S. (1983). A meta-analysis of psychotherapy and drug therapy in the treatment of unipolar depression with adults. *Journal of Consulting and Clinical Psychology*, *51*, 856-863.

Steinmetz, J.L., Lewinsohn, P.M., & Antonuccio, D.O. (1983). Prediction of individual outcome in a group intervention for depression. *Journal of Consulting & Clinical Psychology*, *51*, 331-337.

Stern, M.J., Pascale, L., & Ackerman, A. (1977). Life adjustment post-myocardial infarction: Determining predictive variables. *Archives of Internal Medicine*, *137*, 1680-1685.

Taylor, C.B., DeBusk, R.F., Davidson, D.M., Houston, N., & Burnett, K. (1981). Optimal methods for identifying depression following hospitalization for myocardial infarction. *Journal of Chronic Diseases*, *34*, 127-133.

Thomas, C.B., Ross, D.C., & Duszynski, K.R. (1975). Youthful hypercholesteremia: Its associated characteristics and role in premature myocardial infarction. *Johns Hopkins Medical Journal*, *136*, 193-208.

Violon, A. (1980). The onset of facial pain. *Psychotherapy and Psychosomatics*, *34*, 11-16.

Vonknorring, L. (1975). The experience of pain in depressed patients. *Neuropsychology*, *1*, 155-165.

Walker, C., & McWhinnie, J. (1980). *A composite picture of the disabled in Canada*. Ottawa *Health and Welfare Canada.*

Ward, N.G., Bloom, V.L. and Friedel, R.O. (1979). The effectiveness of tricyclic antidepressants in the treatment of coexisting pain and depression. *Pain*, *7*, 331-341.

Weinstein, M.R. (1978). The concept of the disability process. *Psychosomatics*, *19*, 94-97.

Wishnie, H.A., Hackett, T.P. & Cassem, N.H. (1971). Psychologic hazards of convalescence following myocardial infarction. *Journal of the American Association*, *215*, 1292-1296.

World Health Organization (1980). *International classification of impairments, disabilities and handicaps*. Geneva: Author.

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